

Bihar District Gazetteers

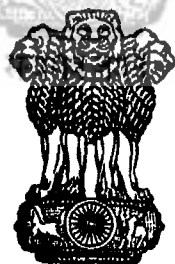
HAZARIBAGH



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By

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[Price—Rupees Five only.]

PREFACE.

I feel great pleasure in writing a preface to the new revised District Gazetteer of my district. The last Gazetteer of Hazaribagh district was compiled by Mr. E. Lister, C.I.E., I.C.S., and published in 1917. It was mentioned in the preface of the book that the Gazetteer had been compiled on the basis of Hunter's Statistical Account (1875), Settlement Report of Hazaribagh by Mr. J. D. Sifton, I.C.S., and some other published books. The last District Gazetteer was thus more or less an administrator's hand-book. Since 1917, however, there have been phenomenal changes in the district of Hazaribagh and a complete re-writing of the District Gazetteer was a necessity. An attempt has, therefore, been made to make the present Gazetteer more comprehensive, with up-to-date materials and fullest available information.

In the course of collecting materials for the re-writing of this Gazetteer, the Editor has drawn on suggestions and contributions from a number of collaborators. A number of old published but rare books like Rushton's Gazetteer (1841), old copies of Asiatic Society and other journals, Statistical Accounts, etc., were made available to the Editor through the courtesy of the Librarian, National Library, Calcutta. The Editor had also the opportunity of studying a mass of old documents regarding the district in the National Archives, New Delhi. The excellent source materials in the shape of the decaying old English Correspondence Volumes for the 18th and 19th centuries available in the Record Rooms of the Deputy Commissioner of Hazaribagh and the Commissioner, Chotanagpur Division, Ranchi, were studied. A sister volume of this re-written District Gazetteer of Hazaribagh based on this source material has been separately published. Rannell's map of the district which was not known as Hazaribagh then has been reproduced. The materials in this volume have thus been largely drawn both from official and non-official sources and also from detailed and scholarly study of all old, ancient and almost decaying records in and outside the State, wherever available, in a spirit of true research.

Sri Krishna Ballav Sahay as Minister of Revenue, Bihar had taken a great interest in the revision of the District Gazetteer and could find time to glance through some of the

drafts. Sri Nanda Lal Sinha, Retired Deputy Magistrate and Chief Election Officer, Bihar with his experience of administrative service in this district for a long time had very kindly taken pains to read with the Editor the drafts in 1956, for which he deserves our thanks. Through the courtesy of the then Government of Bihar and the Editor, I had also the privilege of carefully and minutely going through the whole draft and then discussing it in detail with the Editor for a pretty long time in 1956. Having had the advantage and experience of being a local resident of the district, I gave a number of suggestions which the Editor has very kindly implemented in this volume.

While going through the draft, before it was published, I could very well appreciate the great scholarly labour and pains which the Editor of the volume had put in, while completing this volume and for which I hope the readers and the future historians will be thankful to him. I am sure this book as also its sister volume " Hazaribagh Old Records, 1761-1878 " will prove very useful both for public and private purposes.

PATNA:

15th July 1957.

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AUTHOR'S PREFACE.

THE last District Gazetteer of Hazaribagh by E. Lister, C.I.E., I.C.S., was published in 1917 and had the following Preface:—

“ This Gazetteer has been compiled on the basis of the Statistical Account of Hazaribagh, which was prepared about 1875 under the supervision of Sir William Hunter. It follows closely the form of the corresponding volume on Manbhum which was written by Mr. H. Coupland, I.C.S., and much of its matter has been suggested by the gazetteers of Manbhum and Gaya. In addition to published books, which have been indicated in the appropriate places, valuable original contributions have been received on special subjects from the Rev. S. L. Thompson (Botany), Mr. L. L. Fermor (General Geology), Mr. Thomas H. Ward (Giridih Coalfield), Mr. G. C. Lathbury (Bokaro Colliery), Dr. A. Jowett (Karanpura Valley), Mr. E. Lane (Mica), Mr. C. J. B. Wight Boycott (Emigration), the Rev. J. C. Forrester (Anglican Mission), the Rev. J. A. Dyer (U. F. Church of Scotland Mission), and Babu Bisheshvar Mukharji (Agriculture). The statistics of the recent years have been compiled by Babu J. C. Datta, Deputy Magistrate and Collector of Hazaribagh.

Extracts from or references to the Settlement Report of Hazaribagh appear throughout the book, and I take this opportunity of acknowledging my great indebtedness to its author, Mr. J. D. Sifton, I.C.S., late Settlement Officer of Chotanagpur.”

The present book is a completely re-written edition excepting for portions in Chapters ‘ Physical Aspects ’ and ‘ Geology and Minerals ’. In the course of the last 40 years and particularly in the last 10 years there have been such basic changes in the district that a merely revised edition was not indicated.

The editor is grateful to the collaborators, officials and non-officials, and particularly to Shri Nandalal Sinha, retired Deputy Magistrate and Chief Election Officer, Bihar and Shri Radha Govind Prasad, M.A., B.L., M.L.C., who is now Deputy Minister, Revenue. The editor also got great encouragement from Shri Krishna Ballabh Sahay who was

Minister for Revenue and took keen interest in this work. A book like this could only be produced by the pooling of resources. Besides the help of some of the collaborators the editor got a lot of useful materials by study of the old correspondence volumes preserved in Hazaribagh Record Room. Some of the excerpts have been separately published as Hazaribagh Old Records. Some of the documents preserved in the National Archives, New Delhi were also very helpful. The editor has also been helped by study of a number of books some of which have been mentioned in the bibliography to some Chapters and the rest are mentioned here:—

- (1) An Advanced History of India by R. C. Mazumdar, H. C. Rai Chaudhury and K. K. Datta.
- (2) The Cambridge History of India, Vol. IV.
- (3) The Glories of Magadha by J. N. Samaddar.
- (4) Ancient Geography of India by General Alexander Cunningham.
- (5) Chotanagpore—A little known province of the empire, F. B. Bradley Birt.
- (6) Ancient Indian Historical Traditions by F. E. Pargitor.
- (7) Ranchi District Gazetteer, 1917.
- (8) Bihar, the Heart of India, John Houlton.
- (9) Bengal Past and Present, Vols. 24 and 28.
- (10) Tour Diaries of Captain Simpson (1852-53) [Record Room of Hazaribagh].
- (11) Report of Henry Ricketts (1855) [Record Room of Hazaribagh].
- (12) The Life of Hieuen Tsiang (Beal).
- (13) Early English Administration of Bihar by J. R. Hand.
- (14) Final Report on the Survey and Settlement Operations in the District of Hazaribagh (1908—1915) by J. D. Sifton.
- (15) Statistical Account of Bengal, Vol. XVI, by W. W. Hunter,
- (16) Original Papers in the National Archives, New Delhi.

(There are various papers in the National Archives which throw a considerable light on the early British administration.)

- (17) J. D. Hooker, 1848, Observations made when following the Grand Trunk Road across the hills of Upper Bengal, Parasnath in the Sone Valley, the Kumaon and the Vindhyan Hills, Journal of the Asiatic Society of Bengal, Vol. 17(IJ).
- (18) T. Anderson, 1863, Of the Flora of Bihar and Mountain Parasnath with a list of species collected by Messrs. Hooker, Edgeworth, Thomson and Anderson, Vol. 32.
- (19) D. Praine, 1903, Bengal Plants, Calcutta.
- (20) The Imperial Gazetteer, 1908, Oxford.
- (21) H. H. Haines, 1916. The Forest Flora of Chotanagpur. Calcutta.
- (22) H. H. Haines, 1921—25. The Botany of Bihar and Orissa, Calcutta, Hazaribagh District Gazetteer, 1917, Calcutta.
- (23) K. Biswas 1934. The Vegetation of the Neighbouring Areas of Raniganj and Jharia Coalfields. Trans, Mining and Geological Institute of India, Vol. 29.
- (24) K. Biswas, 1935. The Vegetation of Tundi and Neighbouring Areas of the Hazaribagh District, Bihar, Vol. 30.
- (25) K. Biswas and M. A. Sampat Kumaran, 1949, Botanical Notes on the Satpura Theory, Proceeding of National Institute of Sciences of India, Vol. 15(8).
- (26) Money, H. F., Supplement to the Botany of Bihar and Orissa, Ranchi, 1950.
- (27) Bressers, Rev. J., 1951. The Botany of Ranchi District, Bihar, Patna.
- (28) J. G. Srivastava. A Botanical Trip to Parasnath Hill, Bihar.

PATNA: <i>The 20th August 1957.</i>	}	P. C. ROY CHAUDHURY.
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GAZETTEER OF THE HAZARIBAGH DISTRICT.

CHAPTER I.

PHYSICAL ASPECTS.

GENERAL DESCRIPTION.

The district of Hazaribagh forms the north-eastern portion of the Chotanagpur Division and lies between $23^{\circ} 25'$ and $24^{\circ} 48'$ north latitude and $84^{\circ} 29'$ and $86^{\circ} 38'$ east longitude. Its area is 7,016 square miles. The population in 1951 was 19,37,210. The principal town and administrative headquarters is Hazaribagh, which is situated towards the west of the higher Hazaribagh plateau at an elevation of about 2,000 feet.

The town and the district take their name from the mango grove at Hazari, one of the villages which make up the town of Hazaribagh. The local spelling omitting the final 'h', follows the Hindi form of the word which means grove. This village of Hazari was on the military road from Calcutta to Banaras, which was made about 1782 and coincided at this stage with an earlier road between Kandi and Makundganj. It still possesses the remains of a fine mango grove and it is a reasonable conjecture that it was the usual halting place for travellers and so obtained a pre-eminence over the neighbouring villages. The selection of the locality about 1780 as the headquarters of the Ramgarh Battalion and its adoption in 1834 as the centre of a new civil administrative unit which included both Ramgarh and Kharagdiha and could not with propriety bear the name of either, appear to be the sole reasons for the application of its name to the entire district.

The adjoining districts are, on the north Gaya and Monghyr, on the east the Santal Parganas and Manbhum, on the south Ranchi and on the west Palamau and Gaya. On the east there are no natural divisions for the greater part of the boundary. On the north the face of the lower Chauparan-Kodarma-Giridih plateau coincides roughly with the border. On the west the boundary is physically capricious, except where the Morhar river is followed. To the south the crest of the Ranchi plateau is utilised irregularly and in places the Damodar and Subarnarekha rivers. Two villages (Tilatar and Sisiyatri Salot of Barachatty Police-Station) which are included in the criminal

and revenue jurisdiction of Gaya are entirely isolated in Hazaribagh and similarly Harni and Pathra villages lie wholly in Gaya but are administratively a part of Hazaribagh.

PHYSIOGRAPHIC EVOLUTION AND NATURAL DIVISIONS.

The district forms part of Chotanagpur plateau. It is a region of plateaus, residual hills and intermontane valleys, which occupies the southern half of the State of Bihar. Dr. J. A. Dunn(1) describes the plateau and its evolution as follows :

“ The whole plateau represents an old land surface rising above which there are residual hills and ridges of resistant rock masses. In the west there are several small plateaus rising a further 1,000—1,200 feet above Chotanagpur plateau and representing a still older land surface which is now completely obliterated.

“ The Chotanagpur plateau is being subjected to rapid erosion round its edge. It is a region of uplift, the differential movement along its northern and eastern sides is approximately 800 to 1,000 feet.

“ Subsequent to outpouring of the Deccan Trap there was prolonged erosion and uplift to the extent of 1,000 feet in western Chotanagpur. This uplift permitted the development of a widespread pene-plain, 1,000 feet below the lavas in western Chotanagpur, and the remnants of the latter were left as small plateau in the west. This pene-plain was being formed throughout the greater part of Tertiary times.

“ Next in the later part of the Tertiary period uplift was renewed to the extent of about 1,000 feet in western Chotanagpur, but in the form of a block movement with sharp warping along the north-south line which is now represented by the eastern edge of Chotanagpur plateau. At the same time a trough developed along the valley of Damodar, presumably due to faulting, cutting off the smaller Hazaribagh plateau to the north. Along the northern side of the plateau the movement was more of the nature of a tilt, the surface sloping more gradually towards Kodarma(1). ”

The district can be divided into the following major physiographic regions :

- (1) Hazaribagh, the higher plateau;
- (2) Chauparan-Kodarma-Giridih sub-plateau or lower plateau;
and
- (3) Damodar Trough or Upper Damodar basin.

In addition to the above there is a rugged tract to the west of Hazaribagh plateau and west of Simaria within Chatra subdivision. It is broken country formed of inter-locking spurs and ridges and does not form a major region.

Hazaribagh Plateau.

Hazaribagh plateau, on which Hazaribagh town is situated at its eastern edge, extends for about forty miles from east to west and about fifteen miles north to south. Its north-eastern and southern faces are mostly abrupt; but to the west it narrows and descends slowly in the neighbourhood of Simaria and Jabra, where it curves to the south and connects with the Ranchi plateau through Tori pargana.

“ The plateau top scenery is characterized by rolling landscape with a number of peaks of various shapes and sizes breaking the monotony of the horizon. Their summit levels lie between 2,000 feet and 2,500 feet. The town of Hazaribagh is ringed by seven hills: Sitagarha, Bamhanbai, Silwar, Bhuswa, Bandag, Belian and Canary Hill. The smaller hills have crumbled to boulder heaps, while the larger ones are covered by thorny bushes. ”(2)

Chauparan-Kodarma-Giridih Sub-Plateau or Lower Plateau.

This plateau is elevated about 800 feet from the level of the Gaya plain. Eastward its northern edge forms a well-defined water-shed between the heads of the tributaries of the rivers of Gaya and those of the Barakar river, which traverses Hazaribagh district in an easterly direction. The slope of this plateau to the east is uniform and gentle, and is continued past the river, which bears to the south-east, into the Santal Parganas and finally disappears in the lower plains of West Bengal. The western boundary of the plateau is formed by the deep bed of the Lilajan river. The southern boundary consists of the face of the higher plateau as far as its eastern extremity, where for some distance a low and undistinguished water-shed runs eastward to the western spurs of Parasnath. The drainage to the south of this low line passes by the Jamunia river to the Damodar. This plateau so contained has a general elevation of about 1,300 feet.

“ In the east-west belt of country to the north of Kodarma the streams are rapidly cutting downwards and although the level of the intervening ridges remains at 1,300 feet, the whole belt has been dissected in a most remarkable fashion. The headwaters of these

streams are extremely active and are rapidly cutting back into the plateau, removing the old soil surface and forming widespread *bad* lands along the edge of the plateau. These *bad* lands merge into the deeply dissected belt to the north.

“ The whole of this dissected belt is clear evidence of comparatively recent uplift. The streams and rivers dissecting this belt are carrying away an immense burden of sediment. Uplift has been in stages; alluvium deposited during earlier stages of uplift at the debouchment of the rivers has since been deeply scoured and left as high terraces and cliff faces; excellent examples of these can be seen east of Dabaur on the Kodarma-Patna road. The manner in which some of the larger streams now tend to deposit sediment immediately within their debouchment suggests that, just at present, there is a reversal of movement, subsidence at the extreme northern edge of the belt. ”(1)

Damodar Trough or Upper Damodar Basin.

It lies between the Hazaribagh plateau on the north and the Ranchi plateau on the south, thus separating the two portions of the ancient land-mass. “ This is a very old valley dating back to the lower Gondwana period, that is the Upper Carboniferous, when Peninsular India had undergone a series of trough faulting on a large scale resulting in the formation of many rift valleys and lakes. The Damodar valley lies above one of such rift valleys, while parts of the Mahanadi and Wardha-Godavari valleys are other rift valleys formed at the same time. The Gondwana sediments were laid down in these ancient lakes and valleys and some of the faults which bound the coal-fields are supposed to be contemporaneous with the deposition of strata due to loading. These faults, however, do not always mark the limits of deposition as the sediments spread over river valleys. The parent Damodar flowed through lakes and across the gneissic patches in between the lakes. The lakes were filled up with thick beds of coal and associated strata and thus have escaped destruction. The upper Gondwana deposits were laid down after an erosional unconformity but reached the level of the plateau as it then stood. According to C. S. Fox, this part of Gondwana land was an elevated gneissic plateau which had recently emerged from an Ice age. The Parasnath Hill represents a gneissic pillar left by post-Gondwana erosion and probably indicates the height previously attained by the gneissic plateau. It is, according to C. S. Fox, not an worn down stump of an ancient mountain chain. The height of the Panchet beds forming the Lugupahar (1,466 feet) near Danae station on the Eastern Railway is not much below the height of the adjoining plateau.

It is the remnant of an once continuous deposit. The Bokaro flows nearby. The narrow strip of country between the Ranchi and Hazaribagh plateaus through which the Damodar follows its winding course is not the old rift valley referred to above. This is a part of the pene-plain. It shows evidence of rejuvenation in the incised meanders of the Damodar and gorges near Rajrooppa. The flood plain is much broader lying above the gorge. It is filled only during the rainy season. The gorge section here begins with a series of rapids within the area of metamorphic rocks, while westward over the coarse Gondwana sandstones of the Ramgarh coal-field, it has a higher elevation and the valley is broad and shallow. The river, therefore, is very old and has reached base-level with superimposition over hard and soft rocks alike. "(3) The essential constituent of this basin is a trough between the Ranchi and Hazaribagh plateaus, resulting from enormous fractures at their present edges, which caused the land between to sink to a great depth and incidentally preserved from complete denudation the measures of the Karanpura, Ramgarh, and Bokaro coal-fields. The trough is not continuous, for it is interrupted where the Karanpura valley to the west is separated from Mandu to the east by a lofty spur from the higher plateau which terminates by the bank of the Damodar in Aswa Pahar.

The northern boundary of the Damodar basin is steep as far as the south-eastern corner of the higher plateau of Hazaribagh, where the Konar river carries away most of its drainage and has modified its abruptness. The lower basin of the Konar river falls somewhat steeply from the water-shed which separates it from the Jamunia and in consequence of this, part of the district is rough and largely uncultivated. To the east the latter river descends from its higher level in a wide eastward curve and so its journey to the Damodar is easy and gentle and its basin forms a gradual slope to the south-east. On the south of the trough the Damodar river keeps close to the edge of the Ranchi plateau till it has passed Ramgarh, after which a turn to the north-east leaves on the right hand a wide and level valley, on which the Subarnarekha river begins to intrude south of Gola, till the Singpur Hills divert it abruptly to the south. Farther to the east the Damodar basin passes tamely into Manbhum.

SCENERY.

The scenery varies in each of the three main regions. On the higher Hazaribagh plateau the country is open and cultivation fairly extensive. Near the headquarters station a few rocky hills break the

sky line and in the distance appear the summits of the cliffs which skirt the edges of the plateau. It is at the end of the rains, in October and November, that the landscape is most attractive. The rice in the terraced valleys is turning into yellow and the grazed uplands are still tinged with green. Interspersed are great blotches of pale gold where fields of *surguja* fringe the rice lands or penetrate the glades of the *sal* woods and the distant horizon is broken by the misty violet hills. The days are lazily warm and the nights cool. By December the rice crops are harvested and the grass is withered; only the *sal* trees and gardens of primrose-coloured rape break the drab monotony from which there is no relief till the rains in June bring back the herbage.

On the lower Chauparan-Kodarma-Giridih sub-plateau, the scenery is tame when one has passed beyond the dominance of the steep cliffs of the descent. The surface is still undulating, but the jungle is rarely better than scrub and the grazing lands are barren and scattered rocky ridges disclose the severity of the denudation to which this ancient land surface has been exposed. From one of these at Simradhab on the Dhanwar road an extensive prospect of the Barakar basin clearly reveals its character. The land is seen inclining gently eastward with the river's course; but north and south and west it rises slowly as though to a shallow saucer's rim. On the south-east and south the horizon is shut in by the masses of Parasnath and the buttresses of the higher plateau, but in other directions a few isolated peaks alone interrupt the sky line. In the middle distance village sites are indicated by their scanty screen of jack and mango trees and near at hand the terraces of the rice fields are seen in sharp relief. The absence of water is the most striking feature in the scene.

The most interesting portion of the Damodar basin is the Karanpura valley. The northern side of the valley, after leaving Karanpura, is broken forest country with a scanty population of Adibasis or aborigines until the level basin of the Jamunia is reached. The south is much more fertile containing some of the best rice land in the district and is still decently clad with jungle, while the proximity of the Ranchi plateau breaks the monotony of the landscape.

HILLS.

The western portion of the Hazaribagh plateau constitutes a broad water-shed between the Damodar drainage on the south and the Lilajan and Mohani rivers on the north. The highest hills on this side are called after the villages of Kasiatu, Hesatu and Hudua and rise fronting the south 600 feet above the general level of the plateau. Farther east

along the southern face spur projects right up to the Damodar river, where it ends in Aswa Pahar (2,460 feet). This spur serves to isolate Karanpura pargana from the rest of the Damodar valley. From the south-eastern corner of the plateau Jilinga (*long*) Hill runs down to the Bokaro river. It has a very extensive base and rounded face. Mahabar Jarimo (2,185 feet) and Barsot (2,120 feet) stand in isolation to the east and on the north-west edge of the plateau Sendraili (2,216 feet) and Mahuda (2,410 feet) are the most prominent features. Isolated on the plateau in the neighbourhood of Hazaribagh town are several hills of which the highest (Chendwar) rises to 2,817 feet.

In Karanpura there are two conspicuous masses of sandstone hills. South of Tandwa and near the Palamau border Satpahri (2,081 feet) is roughly triangular in shape. Eastward stretches Mahudi Hill, rising to 2,389 feet of which the last 800 are a bold scrap of sheer sandstone and from the north side a detached crescent forms a striking outwork. Further down the Damodar basin, away to the east of Mandu, the great sandstone mass of Lugu compels attention by the boldness of its outline. Mr. T. H. Hughes* describes it thus: " Standing as the hill does, in the middle of a plain and rearing its summit above any other eminence in the neighbourhood, it is the most prominent natural object which meets the eye for miles around and could never fail to attract attention to itself. " On all sides it has an exceedingly abrupt scarp, modified only on the south-east, where the stream which drains its summit has made a less impracticable path. On the north, it falls almost sheer in a swoon of 2,200 feet to the bed of the Bokaro river, which separates it from the opposing cliff of Jilinga. Its greatest height is 3,200 feet. Inaccessible and covered with thick forests of *sal* trees, it is the appropriate scene of sombre legends of the neighbouring tribes. A demon has his dwelling in great caves in its summit, and girls, venturing alone on the hill, reappear after the lapse of many years crazy and unable to reveal the secrets of their imprisonment. If, however, they are seen from the west modified by the distant Lugu and Jilinga with the steep wooded cliffs of the plateau suggest the curve of a beautiful sea-coast indented by deep and tranquil bays. On the south of the Damodar river the ground rises sharply to the level of the Ranchi plateau, of which the highest station on the border is Baragaon or Marang Buru (3,445 feet). Seen from the north, the edge of this plateau has the appearance of a range of hills, in whose shadow are many secluded valleys of peaceful beauty. Farther to the east, where the river has turned northwards and left a wide plain on the right hand, a triangle of hills rises east of Gola to 2,085 feet. Thence to the east the valley extends without

* T. H. Hughes—Memoirs G. S. I., Vol. VI.

interruption to Manbhum. As one proceeds northwards to the conspicuous block of Parasnath immediately north of the Damodar a stretch of wooded country is crossed which rises up to the water-shed of the Jamunia. Though of no great height the hills (for they appear to be hills when seen from the south) are a formidable obstacle to communications all the way from the junction of the Konar and Damodar rivers to the border of Manbhum.

In the east of the district, on the border of Manbhum, the great mass of Parasnath (4,481 feet) which overhangs the Grand Trunk Road for many miles, lies between the Barakar and the Jamunia and is the most imposing physiographic feature of the whole region. It is the highest point in the whole of lower and middle Gangetic valley.

" The valley-widening processes resulting from the Barakar in the north and Jamunia in the south, have produced the sharp concave crest of the hills running roughly from the west to east. The concavity of the slopes is caused by humid tropical climate.

" From the top of the mountain one has a grand panoramic view of nearly the whole of the central part of the basin. Most remarkable of the features seen in it are numerous sharp conical peaks clustering on all sides, but specially to the south and west. Another feature which catches the eye is the wriggling Jamunia river to the south-west, with its omega shaped meanders. A distant silhouette outline of the hills from the north shows a step-like appearance, revealing the presence of horizontal and vertical joint planes. A closer view of the hills shows two types of crags, a set of vertical needle-like crags where the vertical joints are more intensively developed, and a set of slightly inclined horizontal slabs, where the horizontal joint planes have a more prominent development. The latter constitute the highest peak and the Jain shrine is perched upon these slabs. "(2)

Chauparan-Kodarma-Giridih sub-plateau and the northern edge of the Hazaribagh plateau show a remarkable topographical feature. " The Grand Trunk Road runs along from Bagodar to Barhi and then moves slightly away but up to Chauparan on the water-shed, it can be seen hardly 10 miles to the south. It is a dark wall of rocks rising abruptly nearly 1,000 feet or more from the lower plateau below. The top of the escarpment, as usual in this region, is very often a vertical pallisade of bare rock, while the base is covered up by typical tallus slopes. The most formidable part of the Mahabal ridge near Barkatha, which resembles a huge knife edge, six miles long and 2,251 feet high. Near it is Surajkund, a hot spring from which sulphurous steam and

hot water* pours out continuously. The Barsoti Nadi and some of its branches at this place cut remarkable valleys into and parallel to the escarpment. It is one of these which is responsible for the knife-like shape of Mahabal. The escarpment ends in the Sindralli and Mahuda peaks on the water-shed 2,407 feet high, beyond which is the valley of river Mohana. A number of blocks have been carved out from the plateau edge and stand out as detached, jungle-clad conical peaks with summit levels about 2,000 feet. Six such blocks occur between Bagodar and Barhi. "(2)

On the northern edge of the lower plateau there is seen a confused tract of rocky hills and steep ravines, through which the Sakri and its tributaries have worn out their gradually widening valleys. To the east and on the borders of Monghyr, Ghoranji Hill (1,984 feet) is prominent and northward the Math Pahari (1,807 feet) lies on the border rising 1,200 feet above the plain of Monghyr. North of the Sakri basin the most prominent hills are Rheowa (1,672 feet) on the Gaya border and Bhandeshwar (1,759 feet) a rocky peak about three miles north-east of Gawan. South of the river is Muhawar (2,210 feet), a very prominent landmark lying south of Satgawan and the highest point of a ridge stretching far into Gaya. From Muhawar south-westward the edge of the lower plateau continues to form the district border with Gaya.

*Mineral spring—Surajkund.

I.—Properties:

Radon content in m c	..	..	..	0.7478
Rate of flow (gallons per hour)	..	..	..	3,000
Temperature Centigrade	..	..	..	87°
Gases ; Continuous	..	..	..	CO ₂ and H ₂ S

II.—Composition of water :

(In parts per million)

Silica	..	..	SiO ₂	128
Iron	..	..	Fe	Nil.
Aluminium	..	..	Al	Nil.
Calcium	..	..	Ca	2.9
Magnesium	..	..	Mg	Trace
Sodium	..	..	Na	146
Carbonate	..	..	CO ₃	123
Bicarbonate	..	..	HCO ₃	
Sulphate	..	..	SO ₄	65
Sulphide	..	..	S	..
Chloride	..	..	Cl	92
Fluoride	..	..	F	21
Total Solids				540
Gases	..	..	H ₂ S	Present
			CO ₂	
Detected by spectrum analysis				Potassium Lithium Strontium

(Analysis by Geological Survey of India)

marked by the heights of Maramoko (2,050 feet), Durbasha (2,209 feet) in the Kodarma forest, Lohawar (1,787 feet) overlooking Danua Ghat on the Grand Trunk Road, and Kulua Pahar (1,575 feet) near Huntergunj, a resort of Hindu pilgrims. Throughout its length it is a mass of broken ravines, unfit for cultivation, and important mainly by reason of its deposits of mica. At Kulua the valley of the Lilajan is reached, westward of which is the confused mass of spurs and ranges that make up the Kunda country and attach themselves to the western extremity of the higher Hazaribagh plateau. In the neighbourhood of Kodarma, Nero (1,737 feet) and Banda (1,853 feet) bear witness to the denudation of the lower plateau.

RIVERS.

The Damodar Water-shed.

The outstanding feature of the drainage of the district is the watershed which separates the basin of the Damodar from that of the streams which flow north to join the Ganges. Within that basin the distribution between the Damodar and its tributary the Barakar is of great importance. The main water-shed starts on the western boundary south-west of Simaria on the northern side of Kasiatu Hill, whence it runs north and east along the higher plateau passing about seven miles north-west of the town of Hazaribagh. Thence it curves beyond Itkhori and meets the edge of the lower plateau, with which it coincides till the eastern boundary of the district is reached. The drainage north and west of this line finds its way into the Ganges, through the districts of Gaya and Monghyr. After the Ganges water-shed leaves the district the Barakar has a common water-shed on the east with the Ajay and its tributaries. The term 'basin' is peculiarly applicable to the country drained by the northern feeders of the Barakar. The elevated lip follows a crescent-like line of great regularity for nearly 100 miles and the windings of the river are markedly regular, so few are the disturbing features which break the uniformity of the gradient. The Damodar and its tributaries drain about 4,510 out of the 7,016 square miles in the district.

The Damodar River.

The source of the Damodar or Deonad is Khamarpat, a 3,504 feet high flat-topped hill in Palamau, twenty-five miles from the boundary of Hazaribagh. After a course of ninety miles in the district it traverses Manbhum, Bankura, Burdwan and Hooghly till it joins the river Hooghly below Calcutta. Near its entrance into the district, where it is joined by the Garhi, its bed is 1,326 feet above sea level. At Ramgarh in

thirty-eighth mile it has fallen to 1,030 feet and at the junction with the Konar after a further course of thirty-five miles the elevation is 713 feet. So far the fall averages about 8.9 feet per mile; but for the remaining twenty miles to its junction with the Jamunia, when it is 582 feet above sea level, the fall is 6.5 feet only. For the greater part of its course it passes through a sparsely peopled forest country and the quiet solitudes of its long sandy reaches are very pleasant. Near Rajabera, where it prepares to leave the district, it has worn for itself a rocky bed, where save in times of heavy rain it sleeps in a chain of deep and placid pools. Everywhere fordable in the dry season it is liable to severe floods in the rains, which frequently cause great damage in the lower districts.

Tributaries.

The first tributary from Hazaribagh is the Garhi or Tandwa river, which rises near Kasiatu Hill and drains the western portion of Barkagaon police-station. Next comes the Haharo, on the east of the Mahudi Hill, bearing the drainage of the eastern Karanpura valley. Both are about thirty miles long. The first three northern tributaries, West Haharo, Barki Garhi and East Haharo run through the Gondwana deposits of Karanpura. Their course over the Hazaribagh plateau is insignificant. Here they rise in the jagged peaky Hudua range of hills forming the south-western edge of the Hazaribagh plateau. They create magnificent cascades as they fall over the south-facing escarpment, such as the 100 feet waterfall in the Ghaghra Nadi eight miles to the north-west of the little valley town of Barkagaon. Some of them have also carved out narrow V-shaped gorges, such as the east-west running Taria gorge south of Rajhar Hill, which is barely ten miles south of Hazaribagh town. Once the streams have escaped from these crystalline gorges they flow through the Gondwana sediments. The supra-Panchets which are the youngest of these sediments and which consist of massive sandstones and conglomerates here form conspicuous topographic features. They stand as large chunks of flat-topped surfaces, with steep, towering scarps facing outwards and irregularly dented from all sides. The summit levels over their flat tops are nearly 2,500 feet high being equal to those found on the Ranchi and Hazaribagh plateaus, supporting the theory that they are remnants of the same eroded platform. The sandstones and the conglomerates form sheer vertical walls, specially at the top, and stupendous talus slopes at the base. Some of the chunks have been separated from the main blocks, by incutting valleys and stand out separately. The scarp face of Mahundi looks formidable from Barkagaon. The crystalline escarpments of Hazaribagh form gentler slopes. At a point just opposite to

Barkagaon a small stream falls over the escarpment a sheer 1,000 feet and creates a ' bottomless ' plunge hole, about which there are many folk-lore.

" The southern tributaries of Damodar have developed characteristic valleys inside the edges of the escarpment, sending long arms into parallel ridges. Naikari Nadi has developed the largest number of such valleys. The east-west running face of the escarpment sends out spurs nearly parallel to itself, roughly in an ESE-WNW direction and arms of the valleys run into them flowing in the same direction. This part of the scarp face culminates in Baragaon peak 3,443 feet high which is a conspicuous landmark south of Ramgarh. Farther down Bhera Nadi sends similar long arms of valleys, this time going up from east towards west right up to Barkagaon.

" Near Ramgarh the Damodar flows over a large rolling plain, nearly 1,000 feet high. Below Ramgarh the river is entrenched in the rocks while it keeps a meandering form. At this place near the famous Rajrooppa temple Bhera Nadi meets the Damodar. Before the confluence it meanders in its rocky bed, though its entrenchment is not as pronounced as that of Damodar. But a strange phenomenon is its discordant junction, for it looks like a veritable hanging valley of glaciated regions. It falls over a 30 feet edge of vertical rocks into the parent stream. It is a wonderful sight.

" The Damodar now turns towards the north and joins Bokaro-Konar near Bermo. Bokaro and Konar rivers drain the south-western portion of the Hazaribagh plateau. While the Bokaro runs through a shallow valley and rather rough topography, the Konar and its tributary, the Sivani, rise in cultivated fields and meander leisurely in open rolling country, south and north of the town of Hazaribagh, till they meet near the small village of Pipcho 15 miles east of Hazaribagh inside a dense mixed jungle. Here Sivani is crossed by a dyke and falls over in a rapid. A bigger rapid is met with below the junction. Farther down the Konar flows through rough forested scenery till it emerges from the plateau near Bermo. A portion of upper Sivani and its tributary Chharwa have dug out a shallow valley covered by corridor *sal* forest.

" Thus draining a considerable part of the south-eastern part of the Hazaribagh plateau, Bokaro-Konar rivers enter the Bokaro coal-field as they come down. The Bokaro creates a magnificent fall of 40 feet at the head of the deep V-shaped gorge it has notched in the crystallines. Entering the coal-field it passes through the awe-inspiring gorge between Lugu and Jhumra Hills. "(2) Below the junction of Damodar

with the Konar the tributary Khanjo comes from the south : and the last important affluent is the Jamunia, which rises near Bishungarh and after running near the Grand Trunk Road from Bagodar past Dumri turns south to form the boundary with Manbhum.

The river Barakar rises in cultivated fields near Ichak, a small town seven miles north of Hazaribagh. But the gorge it has notched in the northern escarpment of the plateau has reached a point only six miles from the source near Padma. Here the river tumbles over a number of small falls and rapids in a wild setting, locally known as the Tiger Pool. Other affluents of the river form a broad tree-like pattern on the plateau. But some of these streams have developed valleys parallel to the edge of the escarpment, such as that of the Ketwa.

"The plateau is surrounded on all sides by outfacing escarpments, the northern one being most pronounced. As stated before, the rivers have notched gorges from all sides into the plateau and they create falls and rapids at the head of the gorges. Above these points the rivers meander leisurely over the plateau surface and below them they flow through dark V-shaped gorges and nearly all the roads which ascend up from below, follow one or the other river valley and go up by hair-pin bends near these points called ghats.

Emerging from the plateau the Barakar runs northwards and crosses the Grand Trunk Road near Barhi. Here it twice demolished the bridge over it in sudden floods, the last time in October, 1946, after a heavy tropical downpour. "(2) A new cement concrete bridge has been recently constructed. Farther down near the little village of Tilaiya, where Barakar was emerging out of a pair of wall-like ridges, a dam has been constructed. Thus the huge Tilaiya reservoir has been formed.

" Beyond this place to the north of the river spreads the ' Mica country ' up to the edge of the water-shed and beyond. In the Barakar basin it is drained by Haharo, Keso, Pachkhara, Bareto, Irga and Usri. Beyond the divide are the tributaries of Ganges, Barmar, Sakri and Mohana, flowing northwards. A remarkable contrast is noted in the topography on the two sides of the divide. While in the Barakar basin, it is an open rolling plateau, strewn with boulders and embossed by crumbling peaks with pleasing Mahua glades here and there, beyond the divide, it is a wild country, with a rough topography, cut up into deep gorges, steep knife-edge ridges and conical peaks covered with the dense tropical Kodarma reserve forest. This is due to the greater energy of the affluents. A number of peaks stand out as sentinels on the water-shed, such as Banda Pahar near Kodarma, Bamani beyond Domchanch

and Ghoranji at Kharagdiha near the source of river Usri. The deeply dissected terrain beyond the water-shed is advantageous for locating and working mica bearing veins.

“ The rolling open aspect of the landscape disappears near the main Barakar river, where both the main river and adjoining tributary valleys have dissected the surface sufficiently to make the topography rather rough. *Sal* forests give the area a wild appearance.

“ The valley of river Usri, however, retains the fine open aspect with crumbling peaks scattered over the area. Khandauli, the peculiar saddle-shaped hill made up of granitoid gneiss, dominates the landscape near Giridih, the well-known mica-splitting centre. Its peak is like a volcanic cone and the great saddle attached to it consists of massive boulders.

“ The Barakar passes through a number of small Gondwana basins, the biggest and the most important of them being near Giridih. It is drained by Khako Nadi, a tributary of Barakar. Dolerite dykes, quartz reefs and an island of crystallines are the igneous rocks found in this sedimentary basin. The dykes and the reefs form wall-like features. The sandstones form characteristic hills. The most fantastic shapes are found in the needle shales, in which stream courses are flanked by miniature cliffs, and the bed decorated by patterns of miniature pyramids, popularly called “ slate river ” by sightseers.

“ Usri river passes north of the coal-field. Nine miles below Giridih occur the Usri Falls. This is another beauty spot for tourists. ”(2)

After passing north of the Parasnath range, the Barakar river leaves the district thirty-two miles before its junction with the Damodar. Its basin of 2,050 square miles is comparatively level and after heavy rain the river remains in flood for a long time.

The Sakri river drains an area of 810 square miles, which it has carved out of the northern face of the Chauparan-Kodarma-Giridih sub-plateau. The most important tributary is Kunda Nadi which joins Sakri from the south. Ghalki and Chhotna are the tributaries on the west and Likhari and Ghagra on the east. Seen from above on the Jamdar road in the cold weather the nearer view is of steep ridges clothed with forest, narrowing till they sink below in a wide level plain which bears crops like *rahar*, sugarcane and oilseeds. Through the middle runs a wide river of sand and on the far side, the valleys narrow rapidly and climb steeply till they merge in the dark hills. To the west is seen the mouth of a similar plain from Pihra, and

beyond is the great mass of Muhawar Hill overhanging Satgawan. As it passes to the north-west the river of sand widens and on its level surface trickles of water wander in apparent aimlessness. In reality they are jealously enticed to one or other bank, to be lifted for the watering of the crops. In times of flood the absence of a definite channel brings disaster; for the waters spread over the nearer fields and ruin them by the deposit of their enormous burden of sand.

The Mohani rises about twelve miles from Hazaribagh and drains the north-western part of the Hazaribagh plateau. Its tributaries from the west are Dhab and Garhi. Below its confluence with Garhi, about three miles north-west of Itkhori, it flows through a long and narrow gorge. Here it falls about 100 feet and continues some distance through the gorge. The meandering course of the river indicates that the gorge is due to erosion and not tectonic. It then crosses Grand Trunk Road about two miles from the foot of the Danua pass and flows on into the Gaya plain. The Lilajan begins its journey north of Simaria in the broken country to the west of Hazaribagh plateau and flows through a deep and rocky channel till it reaches the neighbourhood of Jori. Its tributaries in this rugged track are Sinduri and Amjhar. Farther down Jori the hills begin to recede and the stream flows sluggishly over a wide sandy bed. From this point to the Gaya border beyond Hunterganj the valley resembles on a minor scale that of the Sakri described above. Six miles south of Gaya town it unites with the Mohani to form the Phalgu and ultimately discharges into the Ganga or the Ganges.

Other streams also rise from this rugged and broken tract of hills and spurs and form tributaries to Amnat and Mohar rivers, the latter forming the north-western boundary between Hazaribagh and Gaya districts.

The rivers of Hazaribagh are alike in that they are fed by the surface precipitation of rain water. This is for the most part promptly discharged by the water-courses and very little sinks below the surface; and though springs are numerous there is no single one which yields a copious supply of water. The river basins are for the most part steep and frequently rocky; and rainfall is succeeded by sudden floods of brief duration. At other times a scanty stream trickles over the river's rocky channel or is lost beneath a deep bed of gravel and sand. Navigation is impossible, fisheries valueless and irrigation impracticable except on the lower courses of the Sakri and Lilajan, whose level valleys have been formed from the debris of the ravines above.

The following is a statement of the areas drained by the rivers and river systems of Hazaribagh :—

Serial no.	System.	River.	River drainage in square miles.	System drainage in square miles.
1	2	3	4	5
1	Damodar ..	{ Damodar .. Barakar ..	{ 2,440 2,040 }	4,510
2	Ganges or Ganga.	{ Mohani .. Lilajan .. Morhar .. Dhadhar .. Tilaiya .. Dhanarji .. Sakri .. Kiul .. Barnar ..	{ 490 380 170 200 200 810 70 50 }	2,170
3	Son ..	Jhikia Chako	170	170
4	Ajay ..	{ Patro .. Jainti ..	{ 100 100 }	100
5	Subarnarekha	Subarnarekha	50	50
		Total area ..	..	7,000

There are no natural lakes or marshes in the district. A vast reservoir has been formed recently by putting a dam across the river Barakar near Tilaiya. This multi-purpose reservoir has been constructed by the Damodar Valley Corporation as already referred to. Another multi-purpose reservoir is constructed on the Konar river about seven miles south-east of Bishungarh.

CLIMATE.

The district comes within the Tropical Monsoon Regions of the world. Three broad seasons can be recognised :

- (1) The cool season, November to February.
- (2) The hot season, March to May.
- (3) The rainy season, June to October.

In general the climate of Hazaribagh plateau is much the same as that of Ranchi, differing from the other neighbouring districts not only in its lower average temperature, but also in the comparative dryness of the air in the rainy season. After the break of the rains in June, the first three months are usually quite pleasant and by the middle of September the mornings already promise the cold weather. In contrast with Bihar, October is a delightful month. From November to the middle of February the only drawback is the occasional excessive cold which follows on rain. If there is a good fall of rain in February it remains cool till the middle of March. From April to the rains the day temperature, though high, is always below that of the neighbouring districts and it is rare for the nights to be oppressive. The prevailing winds are, in the rains from the south-west, in the cold weather from the west, and in the hot weather from the north-west. The hot weather winds are sometimes dust-laden.

There is an observatory at Hazaribagh maintained by the Indian Meteorological Department and records of temperature, humidity, rainfall, wind velocity, etc., are available for a number of years. The normals of the elements observed have been given in the statement given below. It will be observed that the mean daily maximum temperature is 99.4°F in May and the mean daily minimum temperature is 50°F in December. The highest temperature recorded so far was 111°F on 18th May, 1897 and lowest 36°F on the 16th January, 1933. The mean annual humidity is 60 per cent and the average velocity of wind is 5.7 miles per hour. The mean annual rainfall at Hazaribagh is 53.04 inches.

HAZARIBAGH.

STATEMENT OF MONTHLY NORMALS AT HAZARIBAGH.

		1	2	3	4	5	6	7
			Mean daily maximum temperature. F.	Mean daily minimum temperature. F.	Mean of highest temperature. F.	Mean of lowest temperature. F.	Relative humidity. %	Vapour pressure. mb.
January	I II	.. ..	72.8 77.1	50.3 54.2	80.8 86.3	42.8 45.5	63 44	9.9 9.9
February	I II	.. ..	77.1 87.7	54.2 63.1	86.3 96.0	45.5 53.7	45 39	10.4 11.5
March	I II	.. ..	87.7 97.2	63.1 71.8	96.0 103.6	53.7 63.8	39 31	10.5 12.7
April	I II	.. ..	97.2 99.4	71.8 75.5	103.6 106.0	63.8 67.3	29 20	10.1 9.7
May	I II	.. ..	99.4 93.1	75.5 76.1	106.0 103.8	67.3 70.7	48 38	18.4 17.5
June	I II	.. ..	93.1 85.2	76.1 74.0	103.8 91.4	70.7 71.1	68 64	24.0 24.7
July	I II	.. ..	85.2 84.0	74.0 73.3	91.4 86.2	71.1 70.7	88 83	27.0 28.8
August	I II	.. ..	84.0 84.7	73.3 72.3	86.2 89.3	70.7 69.0	87 85	26.8 28.7
September	I II	.. ..	84.7 83.6	72.3 66.5	89.3 87.8	69.0 59.1	84 82	28.9 27.1
October	I II	.. ..	83.6 77.6	66.5 57.2	87.8 82.6	59.1 50.5	68 60	19.4 13.2
November	I II	.. ..	77.6 72.4	57.2 50.0	82.6 77.6	50.5 44.0	55 64	13.4 10.3
December	I II	.. ..	72.4 ..	50.0 ..	77.6 ..	44.0 ..	64 53	10.3 10.7
Annual Mean	I II	.. ..	84.6 ..	65.4 ..	107.2 ..	41.9 ..	64 56	17.4 17.8

STATEMENT OF MONTHLY NORMALS AT HAZARIBAGH—*concd.*

PHYSICAL ASPECTS.

19

	I	8	9	10	11	12	13	14
		Mean monthly rainfall total in inches.	Highest temperature recorded, F.	Date and year.	Lowest temperature recorded, F.	Date and year.	Pressure mean at sea level, mb.	Mean wind speed, m.p.h.
January	I II	0.89	87	31 1881	36	16 1933	947.4 944.9	5.2 ..
February	I II	1.26	92	36 1896	38	2 1905	945.3 942.8	5.5 ..
March	I II	0.94	102	27 1892	44	4 1898	943.2 940.1	6.4 ..
April	I II	0.55	107	29 1898	57	15 1933	940.9 937.3	6.5 ..
May	I II	1.96	111	18 1897	61	15 1878	936.8 933.4	7.1 ..
June	I II	8.33	109	5 days 1935	68	2 1896	933.5 930.7	6.8 ..
July	I II	13.03	102	1 1901	69	10 1940	932.5 930.1	6.1 ..
August	I II	13.21	91	4 1935	68	21 1939	934.6 931.7	5.9 ..
September	I II	8.94	92	1 1932	65	28 1890	938.2 935.5	5.3 ..
October	I II	3.10	92	12 1907	52	23 1934	943.9 941.2	4.3 ..
November	I II	0.56	89	1 1896	40	25 1879	946.3 943.8	4.3 ..
December	I II	0.27	81	22 1927	39	29 1937	947.8 945.3	4.5 ..
Annual Mean	I II	53.04 (Total)	111	..	36	..	940.9 938.1	5.7 ..

The normals of rainfall and of rainy days for the district of Hazaribagh have been computed and are as follows :—

		Rainfall in inches.	Number of rainy days.
January	...	0.83	1.5
February	...	1.19	2.3
March	...	0.68	1.4
April	...	0.45	1.1
May	...	1.51	2.7
June	...	6.90	9.0
July	...	13.16	16.2
August	...	12.94	16.0
September	...	8.21	9.9
October	...	2.89	3.8
November	...	0.57	0.8
December	...	0.21	0.4
Annual	...	49.54	65.1

There are 14 measuring stations—Pachamba (Giridih), Hazaribagh, Barhi, Chatra, Janua, Ramgarh, Kodarma, Bagodar, Huntergunj, Satgawan, Dhanwar, Tandwa, Gola, Dumri—for which rainfall records are available for a number of years.

In addition there are the following 20 rainfall recording stations equipped with self-recording gauges recently established by the Damodar Valley Corporation in the Damodar catchment area : Hazaribagh, Barhi, Ramgarh, Bokaro, Barakar, Bishungarh, Usri Bridge (Giridih), Danea, Aira, Padma, Persabad, Peterbar, Dawo, Sillichal, Barakatta, Barkagaon, Bhurkunda, Nawadih, Tuladih, Konar. At Hazaribagh, Barhi and Ramgarh, in addition to the rainfall, other elements are also observed. These three observatories are maintained by the Damodar Valley Corporation.

A great variation occurs in the amount of precipitation and distribution of rainfall throughout the district. The maximum average annual rainfall falls near the Parasnath Hills (59.16 inches). Next

comes Gola with 55.45 inches. The minimum average annual rainfall is 43.07 inches at Jamua. The distribution of the rains in the year is a much more important factor than the total amount precipitated. Continuous rainfall in the end of June or July coupled with absence of sunshine is injurious to the maize and other autumn (*bhadai*) crops though it does not prejudice the more important rice crop. Heavy rain in July is needed for the transplantation of rice and *marua*, though it can be postponed as regards the former crop till the middle of August without serious loss; but none of the crops already in the ground in July can bear a long drought in that month. The rains should continue at short intervals and in fairly heavy quantities till the middle of September, when slightly longer breaks are desirable for the harvesting of the earlier *bhadai* crops. But it is most important that there should be good fall in the first week of October, to fill the ears of the early rice, and to give a final supply of water to the lower terraces in which are planted the late maturing varieties. It is on this rain that the fortunes of the *raiya* depends for without it even the lowest lands will disappoint and higher terraces will yield little or nothing. Owing to the great importance of the *mahua* crop it is very necessary that there should be no rain whilst the buds are maturing from about the middle of March or earlier, to the middle of April, during which period untimely showers may arrest or prevent the formation of the flowers.

FISH.

The rivers being hilly there are no regular big fisheries even in the big rivers, namely, Damodar, Barakar and Konar. During the rainy season *rohu*, *catla*, *mrigal*, *tengra*, *bowari* and *pothi* are found when the water rises to considerable height. The main fisheries consist of pisciculture in lakes, tanks, bandhs and ponds where the culture of carp fish *catla*, *mrigal* and *calboso* is done.

Fish trade is in the hands of the fishermen who are located in Hazaribagh town, Kodarma, Barhi, Barkatha, Sureya, Chatra, Bermo, Gomia, Dhanwar and Barkagaon. In the colliery areas the fishermen have taken to work in the collieries. The implements used for fishing is the "cast net" of different meshes. In some cases they use dragnets (*mahajal*). In villages different kinds of bamboo traps are used for fishing.

With the activities of the Damodar Valley Corporation when rivers are dammed there would be plenty of scope for pisciculture. The Tilaiya water area has already been stocked with fry by the Damodar Valley Corporation authorities. The old lakes of Hazaribagh town, Ramgarh and Chatra are suitable for pisciculture.

VEGETATION.

The district, for purposes of vegetation, is divided into the following zones :—

- (1) The hills with a height of over 2,000 feet above sea level.
- (2) The hills flanking the lower plateau and the ghats leading to it.
- (3) The lower plateau.
- (4) The hills flanking the higher plateau and the ghats leading to it.
- (5) All other lands on the plateau that are not under forest.
- (6) The cultivated lands.
- (7) The rivers, rivulets and the streams on the plateau.
- (8) The tanks, ponds and depressions on the plateau.
- (9) The natural lawns.
- (10) The protected grass lands.
- (11) The lands along the sides of the roads, especially in and near the towns.
- (12) The neglected orchards near the towns and elsewhere on the plateau.
- (13) The low lands.
- (14) The introduced plants.
- (15] The Parasnath Hill described below separately owing to its great importance.

(1) *The hills with a height of over 2,000 feet above sea-level.*—The Canary Hill near Hazaribagh town, hills in the Chatra and Barkagaon areas and others on which the forests are now protected are within this zone. These hills are covered over with a mixed forest consisting of both deciduous and evergreen species but protection having been given only recently, the trees are all small in size and there are present very many thorny species, reminiscent of the scrub jungle of the past. The chief trees are *sal* (*Shorea robusta*), *Macoranga denticulata*, *Phyllanthus emblica*, *Mitragyna parviflora*, *Adina cordifolia*, *Eragrostia parviflora*, *Semecarpus anacardium*, *Buchanania latifolia*, *Diospyros melanoxylon* and others. The undergrowth is very dense and composed of a wide variety of plants chief amongst which are *Lantana camara*, *Desmodium palchellum*, *Woodfordia floribunda*, *Indigofera pulchella*, *Leea crispa*, *Flacourtia* spp., *Grewia multiflora*, *Holarrhena antidysentrica*, *Nyctanthes arbor-tristis*, *Vangueria spinosa* and others. The chief stragglers and lianas

are *Acacia torta*, *Smilax macrophylla*, *Asparagus racemosus*, *Butea parviflora*, *Ichnocarpus frutescence* and *Gloriosa superba*. The grasses and small annual dicots growing in the shade are many, chief amongst which are *Chrysopogon gryllus*, *Sehima nervosum*, *Arundiniella* sp., *Digitaria marginata*, and *D. royleana*, *Heteropogon contortus*, *Panicum montanum*, *Setaria glauca*, *Pennisetum setosum*, *Perotis indica*, *Vicoa auriculata*, *Spermacoce stricta*, *Zornia diphylla*, *Rungia parviflora*, *Cephalostigma hirsutum*, *Oxalis corniculata*, *Justicia indica*, *Leucas montana*, and *Phyllanthus* spp. *Rhynchosia minima* and *Lygodium* sp. climb up on the shrubs. Silver fern and mosses of various species grow in the crevices of the rocks.

The thorny and the Xerophytic species are found mainly at the base of the hills.

In addition to their great value in increasing the amount of precipitation, preventing erosion and providing sanctuary to the game animals, such forests are important because of the economic value of the species growing in them.

(2) *The hills flanking the lower plateau and the ghats leading to it.*—All such areas including the ghat leading to Kodarma from Rajauli in Gaya district are covered with a dense forest. The Kodarma Reserve forest covering an area of nearly 56 square miles is an instance. The forest is mainly a deciduous monsoon forest, though along the highways and near villages there is much induced scrub. *Sal* and its associates are there, but the predominance is of the bamboo (*Dendrocalamus strictus*).

(3) *The lower plateau which forms the major part of the district (excluding part of the Sadar Subdivision).*—This is a vast flat area, the margins of which are flanked by hillocks and a greater part, particularly around the hills and in the neighbourhood of the rivers and streams, is undulating. The hills and the undulating lands are covered with jungles. Till 1946, the greater part of these belonged to the Zamindars and were mercilessly exploited, and in consequence the vegetation had retrogressed to the scrub stage. Now under protection of the Forest Department, the jungles are improving. The chief plants forming the top canopy are the *sal* and its associates like *Terminalia tomentosa*, *T. arjuna*, *Gmelina arborea*, *Albizia lebbek* and *A. procera*, *Bombax malabaricum*, *Boswellia serrata*, *Anogeissus latifolia*, *Cleistanthus collinus*, *Ougenia dalbergioides* and *Spondias magnifera*. In the lower canopy are found *Acacia arabica* and *A. catechu*, *Woodfordia floribunda*, *Holarrhena antidysenterica*, *Casuarina tomentosa*, *Gardenia* spp., *Carissa spinarum*, etc. In the ravines and

nalas are found *Mangifera indica*, *Alstonia scholaris* and *Casaeria graveolens*. Under protection the vegetation is becoming denser but cannot attain its natural state as these forests are heavily burdened with rights.

In the Reserve forest areas, the vegetation is thicker still and lots of lianas, and annual herbs and climbers are seen. The thorny species are at an advantage here, because in the protected areas they are allowed to be cut and carried away for fencing. In addition to the species in the protected forests the following are seen :—

In the top canopy : *Acacia arabica*, *A. catechu*, *Bassia latifolia*, *Bauhinia variegata*, *B. malabaricum*, *Diospyros* spp., *Macaranga denticulata*, *Artocarpus lakoocha* and *Cochleosperrum gossypium*.

In the lower canopy : *Carissa spinarum*, *C. paucinerva*, *Grewia multiflora* and others.

Scramblers : *Zizyphus penoplia*, *Asparagus racemosus*.

Climbers and lianas : *Vitis* spp. *Bauhinia anguina*, *Porana paniculata*, *Dioscorea tomentosa*, *Hemidesmus indicus* and *Smilax* spp. The undershrubs and herbs are represented by *Pennisetum Setosum*, *Dichanthium annulatum*, *D. caricosum*, *Amphilosphis pertusa*, *Eragrostis pilosa*, *Apluda varis*, *setaria glauca*, *Oplismenus burmanni*, *Sehima nervosum*, *Heteropogon contortus*, *Sporobolus diander*, *Chrysopogon* spp., *Perotis latifolia* and *Eragrostis tenella* among the grasses. Of the dicots the following are seen : *Triumphetta neglects*, *vernonia cinerea*. *Spermaoce hispida*, *Zornia diphylla*, *Alysicarpus bupleuri-folius*, *Justicea simplex*, etc.

The chief aim of Government is not the profitable exploitation of the jungle resources but conservation, to provide grazing fields, to ensure supply of economic products such as *sabai* grass, bamboos, and timber to the State and India as a whole, etc., consistently with the enjoyment of customary rights by the villagers.

In addition to the *sal* logs, these forests yield valuable timber (*paldu*, *sandam babul*), furniture wood (*sissoo*, *am*), wood for making match sticks and slate frames (*bombax*), gum (*babul*), resins (*salai*), nuts for tanning (*amla harra*, *baherra*) and many medicinal drugs. In fact, the Adibasis get most of the necessities of life out of these forest trees.

(4) *The hills flanking the higher plateau and the ghats leading to it.*—They are also covered with jungles and the jungles are denser than their counterparts in the lower plateau. The trees are much taller and there are not many thorny species. Near the villages, due to intensive felling and grazing, the soil of the hills is exposed and erosion is taking place at a rapid rate. Xerophytic grasses like *Sehima nervosum* are very prominent in such areas. *Lantana* and *Hyptis* fringe such jungles. *Sal* is dominant but in early summer *Cochleospermum gossypium*, *Boswellia serrata* and other deciduous species become prominent by virtue of their aging yellow leaves and *Butea* spp., and by virtue of the immense masses of crimson flowers they produce. Early in winter the climbers *Porana paniculata* and *Ichnocarpus frutescence* cover up the tops of trees with their small white flowers.

Reserve forests as in the upper reaches of the Damodar and Barakar rivers are thicker still and show a predominance of evergreen species. *Sal* also is in abundance. *Ficus* spp., and others form a large proportion of the species and being almost inaccessible are left undisturbed.

Afforestation work is being done both by the Forest Department and the Damodar Valley Corporation in areas that were badly eroded due to upland cultivation of *jowar*, *sarguja*, *kulthi*, etc. It is now hoped that the area under forests will greatly increase.

(5) *All other lands on the plateau that are not under forest.*—A considerable portion of the plateau is not under forest, and cultivation is also not possible there without a good deal of expenditure and special steps, which the tenant is not in a position to undertake. Such portions cover the areas where the rocks are exposed, or where ravines and gulleys have been formed, or where the top soil is washed away due to heavy sheet erosion, or where the land is very steep. Most of such areas are being treated by the Soil Conservation Department of the Damodar Valley Corporation. They are working in such a way that all such land is profitably utilized and erosion is reduced to a negligible minimum. For this purpose they are doing afforestation, contour-terracing for upland cultivation, levelling of gulleys and ravines and planting of grasses and legumes, as necessary. The dams and reservoirs made by them are helping in storage of water on the plateau and thereby increasing the moisture content of the soil and of the atmosphere. A number of dams and reservoirs are also under contemplation. All this will help in making the vegetation of the district richer.

(6) *The cultivated lands.*—The areas under cultivation are of two types: the highlands where rain water does not accumulate and the lowlands where it does. In the last category may also be palced the

banks and beds of the rivers and streams. All such low lands are terraced and put under rice cultivation. No artificial means of irrigation having been adopted by the cultivators, the richness or the poverty of the paddy crop depends on the vagaries of nature. The paddy stubbles are left in the fields so that it serves as fodder for the cattle as also for enriching the soil. Very little of manure is added to the soil. The rice crop therefore is generally poor and even the very low lands show a very poor rice field flora. Rice fields that are left fallow during the season, and their embankments and terraces show a thick growth of grass.

The highlands, particularly if not very sloping and not very poor, are planted with a variety of rainy season crops, such as *marua*, *jowar*, *arhar*, sometimes sugarcane. After this crop the land is sown with winter crops if any irrigation is available and is economically feasible. This happens only near the towns where vegetables are in demand. Pea, tomato, potato, cauliflower, mustard seed, etc., are the common winter vegetables. The sloping highlands away from villages, are superficially scratched with the plough once every two to three years and planted with *sarguja* or *kulthi*. The lands newly brought under cultivation are similarly treated.

Roundabout the villages and the cultivated lands are seen isolated trees of *Bassia latifolia*, *Mangifera indica*, *Borassus flabellifer* and *Phoenix sylectris*, the first being very common. Most of them have been planted for their great economic importance. The fencings around the winter crop field grow on them *sem*, *lobia* and various *cucurbitas*.

(7) *The rivers, rivulets and the streams on the plateau.*—They are many but they run only during the rains and with great force and as such no vegetation is possible in them. In the summer their beds are dry and show rocks or sand. The few pools here and there show a growth of algae in them. The sloping banks of most of these, if not already cut up by gullies and ravines, are terraced and planted with paddy. Where left uncultivated, a wide variety of grasses grown on them. The very low fields near the level of the river beds are moist and after the crop of late rice show some grasses in them.

(8) *The tanks, ponds and depressions on the plateau.*—These show a very poor vegetation. The chief species found are *Asteracantha longifolia*, *Panicum proliferum*, *Homalocenchrus hexandrus*, *Naias graminea*, lilies, lotus, etc. The ditches that are on the fringes of the villages and urban areas and receive a lot of refuse matter are very rich in vegetation but grow useless plants such as *Scirpus articulatus*, *Azolla pinnata*, Lilies, *Hydrilla*, etc. Pigs wallow in them.

The lakes formed by the building of the dams because they are absolutely new, have almost no vegetation in them as yet, other than a few algae.

(9) *The natural lawns*.—They are covered with small closely cropped grasses like *Amphilophis pertusa*, *Dichanthium caricosum*, *Sporobolus diander*, *Apluda varia*, *Eragrostis pilosa*, *E. Sp.*, *Setaria glauca*, *Cynodon dacylon*, *Digitaria royaleana*, *Brachiaria isachne*, *Heteropogon contortus* and *Chrysopogon aciculatus*, the last one being the most prominent. Mixed up with these grow many dwarf and prostrate dicots like *Rungia parviflora*, *Indigofera linifolia*, *Blumea* spp., *Evolvulus alsinoides*, *E. nummularius*, *Desmodium triflorum*, *Spermacoe stricta*, *Athroisma laciniata*, *Alysicarpus monilifer*, *Euphorbia hirta*, *E. granulata* and *E. thymifolia*. But for these, the cattle and goats in the towns would go without food and the necessary exercise.

On the edges of the lawns grows *Sehima nervosum* and in depressions are seen *Cyperus* spp., *Fimbristylis schoenoides* and other species, *Eleusine aegyptica*, *Erythra roxburghii*, etc.

Here and there are seen a few plants of cactus, lantana and *Cassia tora* with which grow *Ageratum conyzoides*, *Oplismenus burmanni* and other shade loving species.

Lately there has been some scraping of grass for the cattle. This is bringing in the more xerophytic type of grasses like *Paspalidium flavidum*, *Imperata cylindrica*, *Saccharum spontaneum*, etc. which no cattle will relish.

(10) *The protected grass lands*.—They could be seen in fenced off nurseries and young plantation areas in Kodarma and Hazaribagh. Mixed up with and dominating over the species in the list under (9) above are seen many tall grasses like *Themeda strigosa*, *T. quadri-valvis*, *Apluda varia*, *Rottboellia exaltata* and *Amphilophis odorata*. The following are also observed: *Mimosa pudica*, *Peristrophe bicalyculata*, *Achyranthes aspera*, *Elephantopus scaber*, *Euphorbia heterophylla*, *Scoparia dulcis*, *Alysicarpus bupleurifolius*, *Sida veronicaefolia* and *S. acuta*, *Emilia sonchifolia* in shade, *Tragia involucrata*, *Tridax procumbens*, *Desmodium gangeticum*, *Zornia diphylla* and along and on walls, if any, *Chloris virgata* and *Arthraxon lancaefolius*. Where protection has continued for a longer period as in the Hazaribagh Afforestation area near Canary Hill, there are found a few shrubs like *Flemingia chapper*, *Grewia multiflora*, *Crotalaria sericea* and a few climbers.

(11) *The lands along the sides of the roads, especially in and near the towns on the plateau.*—These lands are mostly covered with scrub, the dominant species of which is *Lantana camara*. Protected by it and under it grow *Cassia fistula*, *C. tora*, *Anona squamosa*, *Urena lobata*, *Pongamia glabra*, *Zizyphus* spp., *Capparis horrida*, *Carissa spinarum*, *Clerodendron infortunatum*, *Elephantopus scaber*, *Emilia sonchifolia* and *Ailanthus excelsa*. Elsewhere grow *Phoenix sylvestris* and *Hyptis suaveolens*. *Xanthium strumarium* grows near ditches.

(12) *The neglected orchards near the towns and elsewhere on the plateau.*—They show about the same vegetation as seen along the roads, a scrub, the dominant species being *Lantana camara*. But there being some protection here as contrasted with the road sides, there is more development of mesophytic species. Annual herbs and climbers are seen in great abundance. Perennial climbers like *Hemidesmus indicus*, *Cryptolepis buchananiana*, *Abrus precatorius* and *Dioscorea* spp. are very common.

(13) *The low lands.*—They cover the basins of Damodar, Barakar, Konar and other rivers. Excepting just near the foot of the hillocks where there are still some remains of a deciduous forest, all other land is under cultivation. The forest region contains the same species as found in the plateau, that is *sal* associated with *Terminalia* spp., *Bassia*, *Butea*, *Schleichera*, *Nyctanthes*, *Zizyphus* and others. But the trees are fast being cut away and in place of the deciduous monsoon forest is growing a scrub jungle in which the thorny species form a major part.

The rocky and sandy waste lands also bear a scrub jungle. The species found here are *Phoenix sylvestris*, *Calatropis gigantia*, *Vitex negundo*, *Jatropha gossypifolia* and annuals like *Tridax procumbens*, *Martynia diandra*, *Barleria cristata* and others. A few annual climbers are also seen.

In the tanks and ponds near villages, the vegetation is poor but the following plants are commonly seen. *Hydrilla verticillata*, *Vallisneria spiralis*, *Ceratophyllum demersum*, *Lagarosiphon roxburghii*, *Ottelia alismoides*, *Lemna*, *Pistia*, *Azolla*, *Jussia repens* grow on the surface and *Marselia quadrifida*, *Ipomea reptans*, *Hygrophorhiza aristata* and others encroach upon the surface of water from along the margins. Excepting for serving as food for aquatic birds and pigs these plants are useless. *Trapa* is cultivated in some ponds.

The lands left uncultivated in and around the scrub jungles grow various grasses of which *Heteropogon contortus*, *Apluda varia*,

Eragrostis spp., and *Imperata arundinacea* are the chief. In the pasture land grow *Chrysopogon aciculatus*, *Paspalum flavidum* and various dicots.

(14) *The introduced plants.*—In addition to the many plants that have become introduced accidentally, like *Lantana camara*, *Croton sparsiflorus*, *Acanthospermum hispidum*, *Hyptis enaveolens* and others, man has introduced a number of useful exotic plants like *Eucalyptus*, Cashew nut and *Casuarina* and these plants are thriving. The Forest Department is particularly emphasising afforestation of new areas with these. Within a short period, the district will be able to produce lots of Cashew nut and *Eucalyptus* oil for local consumption as well as for export.

THE PARASNATH HILL.

Physical features.—The huge Satpura-Vindhyan massive terminates towards the east in the Ranchi-Hazaribagh plateaux. Of this, one of the outlying spurs extending across the boundary of Manbhum and Hazaribagh districts and to the east of Hazaribagh itself is the Tundi Hill. Parasnath (23°9'N and 86°3'E) is located on this and is the highest hill in the province (4,431 feet above sea level).

Parasnath Hill has a central narrow ridge about four miles long and two miles wide with many rocky peaks, irregular in shape, but taking the general configuration of a crescent with its ends pointing to the north-east and north. In these directions, the principal spurs of the hill extend. On the south-west there are no spurs and the greatest continuous rise occurs; to the north and west the spurs are very extensive; to the south-east there is only one spur of importance.

Climate.—The climate is of the monsoon type, the hot wet months being from April to October.

The rainfall of over 50 inches to 60 inches is mainly derived from the Bay current of the monsoon, both from the branch which runs north and becoming deflected by the Himalayas sweeps up the Gangetic plains and further south, as also from the branch which coming from south-east and east strikes these and other hills in South Bihar directly. The winter rains are due to the Arabian sea current of monsoons.

The upper air currents are noticeable only above 4,000 feet where they are quite strong.

The relative humidity up to 4,000 feet is very high, 75 or more on the average and over 90 during the rainy months.

Vegetation.—The Parasnath Hill is wholly forest clad, though the main spur, the Tundi Hill bears forests only on the inaccessible peaks, around Rajdaha reservoir and in some of the valleys.

The southern face of the hill being fairly steep and therefore inaccessible, the forests are much thicker than elsewhere.

The forests, especially in the lower heights, were extensively exploited till about 1920, so much so that at the base of the hill and up to a height of about 2,000 feet much xerophilous type of vegetation appeared. But after this period the forests were reserved and gradually the xerophilous type of vegetation was succeeded by a tropophilous type. Now also, some firewood is cut at lower heights for the townships of Nimiaghat and Madhuban and quite a large number of cattle graze so that the vegetation is affected adversely. But the typical scrub jungle is seen nowhere on the hill though just at the base such scrub jungle is found.

On the exposed faces and at lower heights as also growing in the crevices of rocks, the trees are low and gnarled and leaves smaller. Their barks are smooth and thin and cortex is green. The chief of these are *Nyctanthes arbor-tristis*, *Dillenia pentagyna*, *Cochleospermum gossypium*, *Gardenia* spp., *Ficus* spp., *Erythrina suberosa*, *Anogeissus latifolia* and others, useful only for firewood.

The rest of the hill contains vigorously growing specimens of trees, at lower heights, of deciduous monsoon forest plants mixed with some xerophilous ones and at higher levels (about 3,000 feet), of evergreen forest species mixed with some deciduous species. In the deciduous forest region, the trees are tall, straight and close together. There are huge lianas growing from tree to tree. The undergrowth is thick in the rains and the ground is covered with herbaceous plants. Lots of mistletoes and epiphytic orchids are seen. Bamboos occupy not an unimportant part of the landscape. Some of the common trees in this region are *C. tomentosa*, *C. graveolens*, *Shorea robusta*, *Kydia calycina*, *Croton oblongifolia*, *Mallotus philippinensis*, *Cedrela toona*, *Buchanania latifolia*, *Semecarpus anacardium*, *Terminalia* spp., *Eugenia Heyneana*, *Hymenodictyon excelsum*, *Wendlandia exserta*, *W. tinctoria*, *Diospyros* spp., *Bassia latifolia*, *Oroxylon indicum*, *Premna racemosa*, *P. latifolia*, *Artocarpus lakoocha*, *Ficus infectoria* and other species.

In the evergreen forests, between 3,000 and 4,000 feet, the conditions are similar to the region described above, though the species are different. There are no mistletoes. The epiphytes are a different set of orchids, *Peperomia reflexa*, ferns, mosses and lichens. Some of

the common species of trees are *Sehrebera swietenoides*, *Callicarpa arborea*, *Premna benghalensis*, *Litsaea polyantha*, *Ficus comosa*, *F. cunea*, *F. retusa*, and *F. roxburghii*.

Due to much cutting of firewood for Jalmandir and the Dak Bungalow the top beyond 4,000 feet is much exposed and bare as compared to the rest of the hill. It contains a few evergreen trees with stunted growth and some Alpine plants in addition to the grasses and annuals that grow up during the rains. The most characteristic plants are *Thalictrum foliosum*, *Berberis asiatica*, *Geranium ocellantum*, *Osbeckia chinensis*, *Anaphalis contorts*, *Lobelia zeylanica*, *Polygonum alatum*; *P. capitatum*, *P. Chinensis* and *Pilea smilacifolia*.

The general character of vegetation is tropophilous, especially up to heights of about 3,000 feet most of the trees shed their leaves at the beginning of the hot season and come out with their flowers. The undershrubs, herbs, annual climbers, rhizomatous or bulbous, the grasses, various zingiberaceae and araceae, land-orchids, and ferns sprout up and flower at the end of the rainy season and continue to do so till the end of the cold season. The lianas produce new shoots and leaves in the rainy season.

The evergreens also produce new leaves and shoots in the rainy season. The innumerable epiphytic mosses, ferns and grasses on the bark of trees become green and lots of mosses, liverworts, ferns and angiosperms grow up on the foot-paths and on the vertical faces of the hills.

INTERESTING PLANTS OF THE DISTRICT.

The district abounds in interesting plants. The lauraceous parasite *Cassytha filiformis* grows at the foot of the Parasnath Hills, near Barhi town and elsewhere on the plateau. *Cuscuta reflexa* is very common everywhere on various trees and shrubs. The root parasite *Balanophora indica* grows under shade in humus on Parasnath Hill and elsewhere. Innumerable orchids are seen growing on the rough barked trees, though the species are different at lower heights and at higher altitudes. Land orchids are very common above a height of about 1,500 feet. Mistletoes of several species are common. They are very prominent early in winter due to their flowers and in early summer due to the leaves.

AVIFAUNA.

The first published work on the avifauna of Hazaribagh district was the paper by V. Ball on the Birds of Chota Nagpur which appeared in *Stray Feathers* in 1874 and 1875(4). Captain R. H. Baillie contributed a paper on the subject to the *Journal of the Bengal Natural*

History Society, Volume XX, 1946(5). Dr. S. C. Law, Professor of Zoology, Calcutta University, who has had considerable experience of the district made a number of observations on Captain Baillie's paper in the same journal in its volume XXIII in 1948(6). The late E. H. N. Lowther, a railway official who in 1946 wrote the book *A Bird Photographer in India*(7), also worked in northern parts of the district along the railway and obtained some excellent photographs particularly of the Crested Swift at nest near Hazaribagh. Black and white reproductions of several Hazaribagh birds can be seen in that book.

Most of the commoner birds of the district can be identified with a little practice by comparison with the coloured plates and field characters given in the *Book of Indian Birds*, published by the Bombay Natural History Society(8), Bombay, and Salim Ali's *Hill Birds of India*, Oxford University Press, Calcutta(9).

The location of Parasnath Hill, over 4,000 feet above sea-level, in this district is ornithologically important. It is likely habitat for many Eastern Himalayan species not found in the lower country around and deserves to be intensively worked. Some Himalayan species instead of shifting merely from a higher to lower level in winter migrate over many degrees of latitude to reach life zones, analogous to their summer habitats on mountains situated in southern and warmer regions. Familiar examples of such "mountain-top migrants" are the woodcock (*Scolopax rusticola*), the Indian Blue-Ghat (*Luscinia brunnea*) and the Pied Ground-Thrush (*Geocichla wardi*). These birds have their home in the Himalayas in the sense that they breed only there, but they habitually spend the winter in the Nilgiris. From the fact that they are so rarely met with in the intervening country it has been presumed so far that they perform their journeys between the Himalayas and the Nilgiris in a single hop covering from twelve to fifteen hundred miles. It is possible that these mountain-top migrants use the Parasnath Hill as a halt on their long journeys during spring and autumn.

The following are the 205 breeding birds of the district:—Jungle Crow (*Corvus macrorhynchus*), House Crow (*Corvus splendens*), Tree-Pie (*Crypsirina vagabunda*), Grey Tit (*Parus major*), Yellow-cheeked Tit (*Parus xanthogenys*), Jungle Babbler (*Tundoides sommervillei*), Common Babbler (*Turdoides caudata*), Rufous-bellied Babbler (*Dumetia hyperythra*), Yellow-eyed Babbler (*Chrysomma sinensis*), Quaker Babbler (*Alcippe poicephala*), Common Iora (*Aegethina tiphia*), Marshall's Iora (*Aegethina nigrolutea*), Gold-fronted Chloropsis (*Chloropsis aurifrons*), Jerdon's

Chloropsis (*Chloropsis jerdonii*), Red-vented Bulbul (*Pycnonotus cafer*), Red-whiskered Bulbul (*Pycnonotus jocosus*), White-browed Bulbul (*Pycnonotus luteolus*), Spotted Grey Creeper (*Salpornis spilonotus*), Stonechat (*Saxicola caprata*), Brown-backed Robin (*Sacicoloides fucata*), Dhayal (*Copsychus saularis*), Orange-headed Ground Thrush (*Zoothera citrina*), Brown Flycatcher (*Alseonax latirostris*), Paradise Flycatcher (*Terpsiphone paradisea*), Black-naped Blue Flycatcher (*Hypothymis azurea*), White-browed Fantail Flycatcher (*Rhipidura aureola*), Grey Shrike (*Lanius excubitor*), Bay-backed Shrike (*Lanius vittatus*), Black-headed Shrike (*Lanius schach*), Rufous-backed Shrike (*L. S. nigriceps*), Wood Shrike (*Tephrodornis pondicerianus*), Scarlet Minivet (*Pericrocotus flavimens*), Short-billed Minivet (*Pericrocotus brevirostris*), Small Minivet (*Pericrocotus cinnamomeus*), White-bellied Minivet (*Pericrocotus erythrophgius*), Black-headed Cuckoo Shrike (*Coracina Sykesii*), Ashy Swallow Shrike (*Artemus fuscus*), Black Drongo (*Dicrurus macrocereus*), Grey Drongo (*Dicrurus Laugicaulatus*), White-bellied Drongo (*Dicrurus Caerulescens*), Large Racket-tailed Drongo (*Dicrurus paradiseus*), Tailor Bird (*Orthotomus sutorius*), Streaked Fantail Warbler (*Cisticola juncidis*), Franklin's Wren Warbler (*Frankiliana gracilis*), Rufous-fronted Wren Warbler (*Frankiliana buchananii*), Ashy Wren Warbler (*Prinia socialis*), Jungle Wren Warbler (*Prinia sylvatica*), Indian Wren Warbler (*Prinia inornata*), Indian Oriole (*Oriolus*), Black-headed Oriole (*Oriolus xanthornus*), Grey-headed Myna (*Sturnus malabaricus*), Black-headed Myna (*Sturnus pagodarum*), Common Myna (*Sturnus tristis*), Bank Myna (*Sturnus ginginianus*), Jungle Myna (*Sturnus fuscus*), Pied Myna (*Sturnus contra*), Baya (*Ploceus philippinus*), Black-throated Baya (*Ploceus benghalensis*), White-backed Munia (*Lonchura striata*), White-throated Munia (*Lonchura malabarica*), Spotted Munia (*Lonchura punctulata*), Red Munia (*Strilda amandava*), Yellow-throated Sparrow (*Gymnorhis xanthocollis*), House Sparrow (*Passer domesticus*), Crested Bunting (*Melophus lathamii*), Dusky Grag Martin (*Riparia concolor*), Wire-tailed Swallow (*Hirundo smithii*), Cliff Swallow (*Hirundo fluvicola*), Red-rumped Swallow (*Hirundo daurica*), Large Pied Wagtail (*Motacilla madraspatensis*), Indian Pipit (*Anthus richardi rufulus*), Skylark (*Alauda gulgula*), Bush Lark (*Mirafa assamica*), Red-winged Bush-Lark (*Mirafa erythroptera*), Rufous-tailed Finch Lark (*Ammomanes phoenicura*), Ashy-crowned Finch Lark (*Eremopterix grisea*), White Eye (*Zosterops palpebrosa*), Purple Sunbird (*Nectarina asiatica*), Tickell's Flowerpecker (*Dicaeum erythrorhynchum*), Tick-nilled Flowerpecker (*Dicaeum agile*), Little Scaly-bellied Green Woodpecker (*Picus vittatus*), Marhatta Woodpecker (*Dendrocopus maharattensis*),

Pigmy Woodpecker (*Dendrocopus moluccensis*), Golden-backed Woodpecker (*Dinopium benghalense*), Black-backed Woodpecker (*Chrysocolaptes festivus*), Tickell's Golden-backed Woodpecker (*Chrysocolaptes lucidus*), Northern Green Barbet (*Megalaima zeylenka*), Crimson-breasted Barbet (*Megalaima haemecephala*), Indian Cuckoo (*Cuculus micropterus*), Large Hawk Cuckoo (*Cuculus sparveroides*), Papiha (*Cuculus varius*), Plaintive Cuckoo (*Coccyzus merulinus*), Drongo Cuckoo (*Surniculus lugubris*), Pied-crested Cuckoo (*Clamator jacobinus*), Koel (*Eudynamis scolopacea*), Large Green billed Malkoha (*Rhopodytes tristis*), Sirkeer Cuckoo (*Taccoucia leschenaulti*), Crow Pheasant (*Centropus sinensis*), Large Indian Parakeet (*Psittacula eupatria*), Rose-ringed Parakeet (*Psittacula krameri*), Indian Roller (*Coracias benghalensis*), Green Bee-eater (*Merops orientalis*), Blue-tailed Bee-eater (*Merops philippinus*), Blue-beared Bee-eater (*Nyctiornis athertoni*), Pied Kingfisher (*Ceryle rudis*), Common Kingfisher (*Alcedo atthis*), Stork-billed Kingfisher (*Ramphalcyon capensis*), White-breasted Kingfisher (*Halcyon smyrnensis*), Grey Hornbill (*Tockus birostris*), Hoopoe (*Upupa Opops*), Malabar Trogon (*Harpactes fasciatus*), House Swift (*Apus affinis*), Palm Swift (*Cypsiurus parvus*), White rumped Spinetail (*Indicapus sylvaticus*), Crested Swift (*Hemiprocne coronata*), Long-tailed Nightjar (*Caprimulgus macrourus*), Jungle Nightjar (*Caprimulgus indicus*), Franklin's Nightjar (*Caprimulgus monticolus*), Indian Nightjar (*Caprimulgus asiaticus*), Indian Barn Owl (*Tyto alba*), Brown Fish Owl (*Bubo zeylonensis*), Great Horned Owl (*Bubo bubo*), Dusky Horned Owl (*Bubo coromandus*), Collared Scops Owl (*Otus asio*), Spotted Owlet (*Athene brama*), Jungle Owlet (*Glaucidium radiatum*), Brown Hawk Owl (*Ninox sountulata*), Pondicherry Vulture (*Sarcogyps calvus*), Griffon Vulture (*Gyps fulvus*), Long-billed Vulture (*Gyps indicus*), White-backed Vulture (*Pseudogyps bengalensis*), Scavenger Vulture (*Nephron percnopterus*), Laggar Falcon (*Falco jugger*), Red-headed Marlin (*Falco chiquora*), Tawny Eagle (*Accipiter rapax*), Small Spotted Eagle (*Aquila pomarina*), Crested Hawk Eagle (*Spizaetus cirrhatus*), Short-toed Eagle (*Circus ferrox*), Crested Serpent Eagle (*Haematornis cheela*), White-eyed Buzzard Eagle (*Butaster teesa*), Pallas's Fishing Eagle (*Haliaeetus leucorhynchus*), Brahminy Kite (*Haliastur indus*), Pariah Kite (*Milvus migrans*), Black-winged Kite (*Elanus caeruleus*), Shikra (*Accipiter badius*), Crested Honey Buzzard (*Pernis ptilorhynchus*), Green Pigeon (*Treron phoenicoptera*), Orange-breasted Green Pigeon (*Dendrophassa bicincta*), Emerald Dove (*Chalcophaps indica*), Blue Rock Pigeon (*Columba Livia*), Rufous Turtle Dove (*Streptopelia orientalis*), Spotted Dove (*Streptopelia chinensis*), Little Brown Dove (*Streptopelia senegalensis*), Ring Dove (*Streptopelia decaocto*), Red Turtle Dove (*Oenopelia tranquebarica*), Painted Sand Grouse (*Pterocles indicus*) Common Sand

Grouse (*Pterocles exustus*), Peafowl (*Pavo cristatus*), Red Jungle Fowl (*Gallus gallus*), Red Spur Fowl (*Galloperdix spadicea*), Painted Spur Fowl (*Galloperdix inulata*), Grey Quail (*Coturnix coturnix*), Jungle Bush Quail (*Perdica asiatica*), Blewitt's Bush Quail (*Cryptoplecton erythrorhynchum*), Black Partridge (*Francolinus francolinus*), Painted Partridge (*Francolinus pictus*), Grey Partridge (*Francolinus pondicerianus*), Bustard Quail (*Turnix suscitator*), White-breasted Waterhen (*Amaurionis phoenicurus*), Moorhen (*Gallinula chloropus*), Coot (*Fulica atra*), Bronze-winged Jacana (*Metopidius indicus*), Pheasant-tailed Jacana (*Hydrophasianus chirurgus*), Painted Snipe (*Rostratula benghalensis*), Lesser Florican (*Syphoetides indica*), Stone Plover (*Burhinus oedienemus*), Indian Courser (*Cursorius coromandelicus*), Whiskered Tern (*Chlidonias leucepareia*), River Tern (*Sterna aurantia*), Black-gellied Tern (*Sterna melanogaster*), Little Ringed Plover (*Charadrius dubius*), Spur Winged Plover (*Hoplopterus duvauceli*), Red Wattled Lapwing (*Lobivanellus indicus*), Yellow Wattled Lapwing (*Lobipluvius malabarica*), Shag (*Phalacrocorax fuscicollis*), Little Cormorant (*Phalacrocorax niger*), Snake Bird (*Anhinga rufa*), White Ibis (*Threskiornis melanocephalus*), Black Ibis (*Pseudibis papilosa*), White-necked Stork (*Ciconia episcopus*), Adjutant Stork (*Leptopiles dubius*), Openbill (*Anastomus oscitans*), Purple Heron (*Ardea purpurea*), Grey Heron (*Ardea cinerea*), Smaller Egret (*Egretta intermedia*), Little Egret (*Egretta garzetta*), Cattle Egret (*Bubulcus ibis*), Pond Heron (*Adeola grayii*), Little Green Heron (*Butorides striatus*), Night Heron (*Nycticorax nycticorax*), Chestnut Bittern (*Ixobrychus cinnamomeus*), Cotton Teal (*Tettapus coromandelinus*), Whistling Teal (*Dendrocygna javanica*), Spotbill (*Anas peecilorhyncha*) and Little Grebe (*Podiceps ruficollis*).

The following are 61 birds which visit Hazaribagh only in the cold weather:—Bush Ghat (*Sacicola torquata*), Indian Redstart (*Phoenicurus ochrurus*), Red-spotted Blue Throat (*Cyanosylvia svecica*), Red throated Thrush (*Turdus ruficollis*), Blue Rock Thrush (*Monticola solitaria*), Red-breasted Flycatcher (*Muscicapa parva*), White-browed Blue Flycatcher (*Muscicapa superciliaris*), Little Pied Flycatcher (*Muscicapa melanoleuca*), Blue-throated Flycatcher (*Muscicapa rubeculoides*), Verditer Flycatcher (*Eumyias thalassina*), Grey-headed Flycatcher (*Culicicapa cydonensis*), Grey-backed Shrike (*anius tephronotus*), Brown Shrike (*Lanius cristatus*), Great Reed Warbler (*Acrocephalus arundinaceus*), Blythis Reed Warbler (*Acrocephalus dumetorium*), Thick billed Warbler (*Phragmaticola aedon*), Sykesis Tree Warbler (*Hippola's rama*), Eastern Orphean Warbler (*Sylvia hortensis*), Tickell's Willow Warbler (*Phylloscopus affinis*), Brown Willow Warbler (*Phylloscopus collybita*), Dusky Willow Warbler (*Phylloscopus*

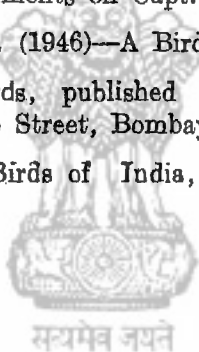
fuscatus), Hume's Willow Warbler (*Phylloscopus inornatus*), Tickell's Flycatcher Warbler (*Seicercus cantator*), Black-naped Oriole (*Oriolus chinensis*), Rose Finch (*Carpodacus erythrinus*), Central Indian Bunting (*Emberiza schoeniclus*), Common Swallow (*Hirundo rustica*), White Wagtail (*Motacilla alba*), Eastern Grey Wagtail (*Motacilla cinerea*), Indian Blue-headed Wagtail (*Motacilla flava*), Black-headed Wagtail (*Motacilla feldegg*), Yellow-headed Wagtail (*Motacilla citreola*), Indian Tree Pipit (*Anthus hodgsonii*), Rock Pipit (*Anthus sordidus*), Richard's Pipit (*Anthus richardi*), Short-toed Lark (*Calendrella brachydactylla*), Wryneck (*Jynx torquilla*), Cuckoo (*Cuculus canorus*), Osprey (*Pandion haliaetus*), Peregrine Falcon (*Falco peregrinus*), Hobby (*Falco subbuteo*), Kestrel (*Cerchneis tinnunculus*), Great Spotted Eagle (*Aquila clanga*), Pale Harrier (*Circus macrurus*), Montagu's Harrier (*Circus pygargus*), Hen Harrier (*Circus cyaneus*), Pied Harrier (*Circus melanoleucus*), Marsh Harrier (*Circus aeruginosus*), Common Crane (*Grus grus*), Brown-headed Gull (*Larus brunneicephalus*), White-winged Black Tern (*Chlidonias leucoptera*), Grey-headed Lapwing (*Microsarcops ciperus*), Wood Sandpiper (*Tringa glareola*), Redshank (*Tringa totanus*), Fantail Snipe (*Capella gallinago*), Gadwall (*Anas strepera*), Pintail (*Anas acuta*), Blue-winged Teal (*Querquedula querquedula*), Shovellar (*Spatula clypeata*), Red-crested Pochard (*Netta rufina*), and Smew (*Mergellus albellus*).

ZOOLOGY.

The deforestation has definitely affected the fauna population. Indiscriminate shooting particularly in the years when military personnel were stationed in the district and its neighbourhood in connexion with the Second Great War is another contributory cause. The Santhals are also indiscriminate hunters. In the last District Gazetteer tigers were referred to as follows:—"They still haunt the Kodarma Forest, and are permanent residents of the hills near Danto, north of the headquarters station. In Khesmi and Dorando, Satgawan and Pratappur there appeared to be families ordinarily in residence." These observations have lost their force. There are now tigers in Pratappur and Satgawan area but their number has become much smaller. Leopards do not frequently visit the town of Hazaribagh as Lister had observed in the last District Gazetteer. Leopards are, however, well distributed all over the district and often carry on their depredations and are a menace to the village livestock. Bears, hyenas, jackals, foxes, pigs and hares are still quite common. Of deer, *sambhar*, spotted deer, hog deer, four-horn deer and ravine deer are met with but cannot be said to be plentiful. Blue bulls are still found in Pratappur area as before. Snakes and lizards are quite common. Inguanas are not as plentiful as before.

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CHAPTER II.

GEOLOGY AND MINERAL RESOURCES.

THE MAIN GEOLOGICAL FORMATION.

The greater part of the Hazaribagh district is still geologically unsurveyed though the district has long been famous as the home of the well-known ruby mica and has several large coal-fields including the Giridih coal-field which contains the best metallurgical coal in India though now diminishing in quantity. Consequently the portion of the Bihar mica belt and the coal-fields which lie in this district are not only economically the most important but geologically the most well-explored areas of the district.

The main geological formations of the district are the following :—

- (1) Recent deposits of alluvium and laterite.
- (2) Post Gondwana {

{	Dykes of basic Cretaceo-Eocene. igneous rocks. Dykes of basic Jurassic and Tri- and Ultrabasic assic. igneous rocks.
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- (3) Gondwana system. {

{	Upper ... Panchet or Lower Ju- Mahadevas. rassic. Panchet se- Lower Tri- ries. assic. Raniganj se- Upper Per- ries. mian. Ironstone Middle Per- shales. mian. Lower { Damuda { Barakar se- Lower Per- series with mian. Karharbari stage. Talchir series Upper Car- with glacial boniferous. boulder bed.
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- (4) Basic intrusives, meta dolerite, amphibolite and epidiorites.
- (5) Mica pegmatites and granite pegmatites.
- (6) Chota Nagpur granite gneiss.
- (7) Dharwars-Crushed or fault breccia, garnet-amphibole schist, granulites, schists, phyllites, quartzites, etc.

In his "Geological Notes on parts of North Hazaribagh", Mallet distinguished the following three stages among the schists : —

- (a) Upper stage of quartzites as seen in Mahabar Hill.
- (b) Middle stage, thick with predominant mica-schists.
- (c) Basal stage with prevalent quartzite as in the Bhiaura ridge.

The massif of Parasnath Hill consists mainly of a pyroxene-bearing garnetiferous quartzite with felspathic gneisses near the base.

The hills apart from those made up of quartzites consist either of huge dome-shaped masses of granite-gneiss or of irregular masses of dark hornblende gneiss. The rock of the former group of hills has been called the "dome-gneiss" owing to its peculiar weathering into dome-like hummocks and ellipsoidal masses due to exfoliation. These domes form a very striking feature of the landscape along the northern fringe of the district. Typical examples of dome-shaped hills made of dome-gneiss are the Nero Hill, 1,737 feet, west of Domchanch ($24^{\circ}28' : 85^{\circ}42'$) : Banda Hill, 1,883 feet, near Kodarma; Maramoko, 2,052 feet, north-east of Kodarma; and Banresur 1,739 feet, north-east of Gawan ($24^{\circ}40' : 86^{\circ}1'$).

The dome-gneiss, a variety of the Chota Nagpur granite-gneiss, is a pink-coloured gneissose granite, sometimes porphyritic, composed essentially of microcline, quartz, acid oligoclase and biotite as the main constituents, hornblende in subordinate amount, and accessory sphene, apatite, zircon and fluorite. The rock also occurs as thin sheets intruded into the schist folia giving rise to a composite gneiss or injection gneiss. Near the margin, the gneiss is coarse-grained and slightly banded. Near the granite-mica-schist boundary, as near Jurga, Ambakola Lora, etc., it becomes a porphyroblastic gneiss with large ovoids of porphyroblastic feldspars, resembling the Rapakivi type of gneiss described from Finland. In the western part of the mica belt, granitic material has soaked through the country rocks forming hybrid mica-schists and mica-gneisses.

The following types of the dome-gneiss and associated rocks have been recognised by N. L. Sharma : granite-gneiss, foliated granite-gneiss, biotite-rich granite-gneiss, epidote-bearing granitic rock, schistose and aplitic muscovite-biotite gneiss, granulitic hornblende and biotite gneisses and biotite-hornblende gneiss. Holland gave the first petrographical description of the dome-gneiss and regarded it as a granite (or granitite) intrusive into the schists. The gneissose structure was considered as due to parallel disposition of the constituents. Though the banding may be original due to tectonic forces during the intrusion of the granite magma, there is no doubt that the rock has suffered from later regional metamorphism.

The schist belt forms an irregular scarp, with a series of *ghats* leading from the gneissic upland of North Hazaribagh to the Ganga plain. The comparatively rapid erosive action of the swift flowing

streams has dissected the country in a way which facilitates the detection of mica-bearing pegmatites and the mining of mica. The schists represent rocks of diverse origin, many of which such as the amphibolites, hornblende schists and granulites differ very little in composition from known igneous rocks. The amphibolite bands are portions of pre-existing masses of basic igneous rocks which were disrupted by the later granite intrusives.

The para-metamorphic rocks in the Kodarma area fall into the following classes, according to Sharma: (i) sillimanite-gneisses which pass into (ii) muscovite and biotite-gneisses without sillimanite. These pass into (iii) mica-schists or muscovite biotite-schists with the complete absence of feldspar and an abundance of muscovite. Lastly are the (iv) calc-silicate granulites which are very subordinate in quantity and represent bands of impure calcareous sediment.

In the Giridih area Holland had described diorite rocks which generally rise as small hills from the crystalline basement rocks. They also occur as dykes in various places in Chotanagpur parallel to the foliation of the pre-existing rocks. The diorites have formed from original plagioclase-pyroxene rocks. In the Bonkhooja Hill, a small peak west of the Usri and north of the coal-field, hornblende has developed parallel to the porphyritic augite. In Chepo Hill, hornblende has formed isolated crystals in the augite while the rocks have been crushed and foliated into fissile hornblende-schists. Another rock which is somewhat peculiar is an eurite which forms two large dykes, one of which runs along the northern boundary of the coal-field for some distance, and the other running parallel to the south boundary from a little to the south of the junction of the Komaljore and Suni *nadis*. The eurite is a dark green compact rock, brecciated, and the pieces recemented with granular quartz and with occasional patches of granitic material.

The pegmatites represent the end products of the granite magma which had earlier formed the dome-gneiss. The pegmatites which carry mica are always associated with mica-schists and gneisses, while the pegmatites which traverse the dome-gneiss do not contain workable quantities of mica. There are two types of pegmatites, namely, simple and complex. The simple pegmatite is a microcline-pegmatite, consisting essentially of microcline and quartz with subordinate muscovite which is not usually in workable quantity. Biotite and tourmaline are the common accessory minerals. It traverses both granite-gneiss and the para gneisses and schists. Where the dome-gneiss is contaminated with inclusions of

basic rocks, or is itself a hornblende-bearing rock, the pegmatites are rich in hornblende. These are intersected by pegmatite veins of later phase devoid of hornblende.

The complex pegmatites are mica-bearing. They are plagioclase mica-pegmatites. In addition to plagioclase and muscovite, they contain tourmaline, apatite, garnet and beryl. The minerals occur as big crystals. These do not traverse the granite-gneiss but are confined to the country rocks in the manner of lenses, and the schist inclusions in the granite and they follow the strike and foliation direction of the schists. The 'books' of mica are found on both the foot and the hanging walls of a pegmatite vein, or only on one of them. When large books of mica occur quartz forms as a central core with books of mica on its two sides.

Pegmatite veins more than two feet in thickness have been enriched in mica, but veins of greater thickness are not so rich probably because reactions producing mica have been very limited. The reacting solutions may have travelled along the walls and also along the junction between the central core of quartz, if present, and its marginal zone of felspar. The veins may split, or may pinch out and appear again in depth. Some veins consist only of massive felspars containing tourmaline and barren on the surface. In the western portion of the mica belt, the veins become thin, less frequent, and the mica is of small size and of inferior quality such as near Chauparan and Gurpa. Tourmaline and beryl occur to a smaller extent, and the mica is green, or stained, or white.

The mica in the pegmatite is associated with a peculiar grey quartz locally known as 'Kajra' meaning black. There is another type of colloidal silica known as 'Jogni'. These are considered as a good indicator of mica. The quartz is followed by a massive zone of felspars locally called 'Harwa', followed by massive quartz in the core known locally as 'Bhuja' which, as has been said above, may not be present always.

The next younger geological formation in the district belongs to the Gondwana System, the lower division of which comprises the most important coal measures of India. The coal-fields of the Hazaribagh district lying in the Damodar valley are the westerly continuation of the great belt of coal-fields beginning with the Raniganj coal-field in West Bengal and followed by the Jharia and the small Chandrapura coal-fields in the Manbhum district. In the Hazaribagh district they begin with the Bokaro followed

by the South and North Karanpura coal-fields. All these were once part of a great spread of Gondwana strata along a rift valley formed by trough faulting along the Damodar valley—the rift being a branch of the main belt of trough faulting following the line of the Narbada-Son.

All the coal-fields have been intruded by dykes and sills of dolerite and basalt, which have usually been considered as the hypabyssal representatives of the Rajmahal flows. According to Fox they may belong to the younger Deccan period of volcanicity. The coal measures are also intruded by dykes and sills of an ultra basic rock known as lamprophyre and related rocks. These are older than the basaltic intrusives. While the basaltic rocks have not damaged the coal much, excepting making mining more expensive necessitating drilling through hard rock, the ultra basic rocks have spoilt large quantities of good coal. They were very fluid at the time of injection and have traversed bedding planes of strata specially in contact with or within the coal seams and have turned the coal into natural coke and otherwise rendered it useless for mining.

The oldest Gondwana rocks belong to the Talchir Series. They consist of greenish splintery needle shales and greenish buff-coloured earthy sandstones and trappoid shales. These have been found in almost every area of coal-bearing Damuda rocks. The basal boulder-bed is rather uncommon. The Talchirs rest over the older rocks with a great unconformity but are overlain by the Damudas with a slight unconformity. The discovery of striated boulders, and occasional faceted pebbles and glaciated pavements led to the conception of an Ice Age before the end of the Carboniferous period in Gondwanaland. The Talchir boulder-bed has the appearance of a re-deposited water-sorted moraine formation.

Plant fossils have been found in the shales overlying the boulder-bed with a slight unconformity. The best occurrence is that near Rikba ($23^{\circ} 45' : 85^{\circ} 22'$) in the Karanpura coal-field. The plant-bearing rocks are lithologically similar to the Talchirs but pass conformably to the Barakar strata.

Karharbari Stage.

In the Giridih coal-field coal occurs associated with strata of both the Barakar Series and the upper division of the Talchir Series which is known as the Karharbari Stage. The former is known as Upper and the latter as the Lower Coal Measures. The flora of the Rikba plant bed is almost identical with that obtained from the Karharbari Stage, and this led to the view that the Karharbari Stage belonged to the Talchir

series. There is, however, an unconformity between the Lower Coal Measures and the underlying Talchir Series in the Giridih area. Moreover the Karharbari coal measures could not be separated by mapping from the overlying Barakar coal measures, and many of the plant fossils are common to both the Karharbari beds and the Barakar beds. In view of all the above facts the Karharbari stage is now included with the basal Barakars.

Barakar Series.

The strata are best developed as a coal-bearing formation in the Jharia coal-field where they are roughly 2,000 feet thick. In the other Damodar Valley coal-fields, the number and total thickness of the beds, including the coal seams, are less than in the Jharia field. The strata consist of yellowish sandstones with occasional carbonaceous layers. Pebbly sandstones are also common, some of which are immediately above seams of coal.

The Barakars pass upwards into a series of strata which are devoid of workable seams of coal and are somewhat less arenaceous. These are known as the Barren Measures.

Raniganj Series.

The type area of the Raniganj Series is the Raniganj coal-field. It is a coal-bearing formation in both the Raniganj and Jharia coal-fields. The series consist of sandstones, shale and coal seams. The sandstones are, in general, finer textured than those of the Barakars and coarse grits are wanting.

Panchet Series.

Upper Gondwana strata are found in the Bokaro coal-field and the North Karanpura coal-field. In the Bokaro field, all the subdivisions of the Damudas are found. The deepest part of the coal-field is under the Lugu Hill where Talchir rocks show up at the east and west ends of the field below the Barakars. The plinth of the Lugu Hill is formed by the Panchet Series of rocks which are unconformable to and overlap the Raniganj Series westwards under Lugu Hill. The top of the Lugu Hill is made of sandstones which are correlated with the Mahadevas of the Satpura region and the Dubrajpur beds of the Rajmahal Hills. There is, therefore, a great break between the Panchets and these top beds.

In the North Karanpura field the Panchet beds are well-developed along the base of several hills, those of Mahudih, Satpahari, Malhan (Gerwa), and Tarhi, where they are capped unconformably by the Supra-Panchets or Mahadevas.

Apart from the coal-fields lying in the Damodar valley, there are three other small coal-fields in the district. These are the Giridih, Chope and Itkhori coal-fields.

Bokaro Coal-field.

The Bokaro field forms a narrow strip along the valley of the Bokaro river, roughly forty miles from east to west and less than seven miles from north to south, between longitudes $85^{\circ} 25'$ and $86^{\circ} 05'$. The field is usually considered as divided into East Bokaro, east of $85^{\circ} 42'$ and West Bokaro to the west of this longitude. Mining has been concentrated in East Bokaro, east of Gumia ($23^{\circ} 48' : 85^{\circ} 50'$) and practically restricted to the Kargali seam which in one section in the Bokaro quarry was found to be 125 feet thick including thin carbonaceous shales. There are 19 seams over 4 feet in thickness. The more important seams are the following :—

12 feet A seam.

Kargali 100 feet seam.

Bermo 40 feet seam.

Karo 80 feet seam.

The reserves in the East Bokaro field in the Kargali seam alone are more than 500 million tons of good coal, most of which is of good caking character, and if cleaned, is suitable for metallurgical coke. According to Fox, if the inferior coal in the Bermo, Karo and other seams is included, the quantity is above 1,000 million tons. The coal is mainly used by the railways. A sample taken by Dr. Fermor from 24 railway wagons with coal from the joint railway quarry at Bokaro gave the following results on analysis :—

Moisture—1.6 per cent.

Volatile matter—23.57 per cent.

Fixed carbon—58.96 per cent.

Ash—16.31 per cent.

Sulphur—0.465 per cent.

Calorific value—7,149 calories.

The West Bokaro field has not been surveyed in great detail but the seams appear to be more disturbed and less attractive than those of the East. One of the best sections is in the Bhagatala nala under the south-west slopes of the Jilunga Hill ($23^{\circ} 50' : 85^{\circ} 40'$). Here 11 seams have been found. Coal occurs in many other places.

In the East Bokaro field a few seams occur in the Raniganj Series but they are thin and unattractive.

Ramgarh Coal-field.

Five miles south of the Bokaro field is the Ramgarh coal-field which extends along the valley of the Damodar between $85^{\circ} 31'$ and $85^{\circ} 4'$, covering an area of about 40 square miles out of which 30 square miles are occupied by the Barakar coal measures. Three seams, 36 feet, 26 feet and 30 feet have been proved, of which only the middle 6 feet of the 26 feet seam is workable. At least five million tons of workable coal is available over an area of at least one square mile, whereas the coal measures occupy 30 square miles so that the reserves may be 150 million tons.

Karanpura Coal-fields.

The Karanpura coal-fields form two areas of Gondwana rocks in the upper part of the basin of the Damodar between $23^{\circ} 38'$: $23^{\circ} 56'$; and $84^{\circ} 46'$: $85^{\circ} 28'$. Their extreme length from east to west is about 44 miles and their extreme breadth from north to south is about 22 miles. Their total area is roughly about 550 square miles and they occupy portions of the districts of Hazaribagh, Palamau and Ranchi, about two-thirds of the total area being in the Hazaribagh district. The South Karanpura field lies entirely in the Hazaribagh district.

The Karanpura coal-fields were discovered by Mr. D. H. Williams who died there in 1848 while carrying on the survey. They were originally mapped by T. W. H. Hughes in 1867-68 after Dr. V. Ball had discovered the South Karanpura field near Tungi ($23^{\circ} 40'$: $85^{\circ} 26'$). They were re-surveyed by Dr. A. Jowett on behalf of Messrs. Bird and Co., during 1915-18. Dr. Fermor reported to the Railway Board on selecting portions of the Karanpura coal-fields and the areas recommended by him have received considerable attention with a view to immediate development. The areas named by Dr. Fermor are Khapra, north of Rikba, Arhara ($23^{\circ} 53'$: $85^{\circ} 14'$) and Devalagara, a mile east of Ara ($23^{\circ} 50'$: $84^{\circ} 57'$).

There are strong east-west boundary faults along the south side of both these coal-fields.

South Karanpura Coal-field.

The South Karanpura coal-field forms an elongated strip of Barakers along the Chaingara fault and has an outlier of Barren Measures with basal Raniganj Measures westward from south of Sanda ($23^{\circ} 40'$: $85^{\circ} 20'$) to Binja ($23^{\circ} 40'$: $85^{\circ} 13'$). It is connected with the North

Karanpura field by a small strip of Talchirs about Hosir one and a half miles north-west of Patal Hill. It has an area of 75 square miles between $85^{\circ} 9'$ and $85^{\circ} 30'$. The South Karanpura field has been developed greatly and several railways and private firms have their quarries. The railway station of Barkakana is situated at the south-east edge of the field. From Barkakana the Eastern Railway continues up the Damodar valley over the south-west end of the North Karanpura field and over the Auranga and Hutar fields of the Palamau district to Daltonganj, whence it follows the Son valley to Son East Bank.

Most of the coal mined is from large open quarries. The Argada area is being worked, on behalf of the former Bengal Nagpur Railway. There are two coal beds, the upper 50 feet and the lower 38 feet thick, separated by sandstone, shales and shaly coal, mixed coal and shale. The coal, according to analysis made by the Coal Grading Board, is of first grade and of low volatile content. In the adjoining Sirka area worked by Bird & Co., the two seams are separated by 17 feet of shale, sand stone and shaly coal. The two Sirka seams are 20 feet thick. The Argada seams are about the middle of the Barakars and may represent the Karo and Bermo seams of Bokaro. The Sirka seams might represent the Kargali seam of Bokaro. The Sirka seams come together and form one single seam 40 feet thick in the Gidi area. The lower Sirka seam and the Upper Argada seams are thought to be the same. The number and thickness of the seams as well as the thickness of the Barakars are quite as well developed as in the best areas of the Jharia coal-field.

North Karanpura Coal-field.

Little work has been done in the North Karanpura field due to lack of communications north of the Damodar river and owing to lack of first class coal according to Dr. Fermor, though according to Dr. Jowett first class coal occurs and the reserves are about 5,000 million tons, of first class and 10,000 million tons of second class coal down to 2,000 feet. The field extends between $84^{\circ} 49'$ and $85^{\circ} 27'$ and has an area of 550 square miles. Besides Talchirs, Barakars, Raniganj, Panchets and Mahadevas also occur. Coal seams occur in both the Barakars and Raniganj. There is a large number of seams some over 72 feet.

Structurally the North Karanpura field consists of three separate basins: the main area under the Mahudi Hills, Satpahari, and on to beyond Ganeshpur forming a single large elongated basin; the Mahlan (Gerwa) basin in the south-west corner along the axis of the South Karanpura field; the Chano or Rikba half basin, which is largely due to faulting, from north of Anjo eastwards into the western end of the

Bokaro coal-field. There is an inlier of gneisses between Chano and Larunga in the valley of the Tordeg nala ($23^{\circ} 46' : 85^{\circ} 20'$), north-west of the Chano basin. The main basin is sliced in three by faults trending east-south-east.

Giridih Coal-field.

The Giridih coal-field is situated 11 miles south-west of the town of Giridih. There are three main seams, namely, the Lower Karharbari, the Upper Karharbari and the Bhaddoah seams. The Lower Karharbari seam varies from 10 feet to 24 feet in thickness and provides the finest metallurgical coal. The Upper Karharbari seam is 4 feet to 10 feet in thickness but is now exhausted. The Bhaddoah averages 6 feet in thickness. The other seams aggregate 66 feet but are of poorer quality. In 1934 Fox estimated the reserves at 49 million tons and a life of 25 years allowing for losses.

Chope Coal-field.

About ten miles west of Hazaribagh and about six miles north of the northern edge of the Karanpura coal-field, there is a small area of Talchir and Barakar coal measures in the bed of the Mohani river, a mile and a quarter south of Chope village ($24^{\circ} 2' : 85^{\circ} 14'$). The area covered by the coal measures is less than one square mile. Only one seam of coal 4 feet thick has been found, but the amount is limited and the quality is poor.

Itkhori Coal-field.

About 25 miles down the Mohani river from the Chope coal-field and extending westward for $3\frac{1}{2}$ miles from the village of Itkhori ($24^{\circ} 18' : 85^{\circ} 9'$), there is a narrow strip of Talchirs with a small area of Barakars (coal measures). There are three coal seams, the lowest or Mohani seam is 8 feet thick, and the second 4 feet and the top is not clearly exposed. Hughes considered the middle 4 feet seam as the best in quality. He estimated the quantity of coal in the field at about 1,500,000 tons. The coal has a high ash content but is suitable for local use.

COPPER.

The occurrence of copper at Baragunda ($24^{\circ} 05' : 86^{\circ} 04'$) in the Giridih subdivision was first noted by Mc. Clelland and Smith. According to Mallet the ore is of copper pyrites which occur in lenticular stringers usually up to $\frac{1}{2}$ inch thick but sometimes up to 3 or 4 inches, and parallels with the foliation of the schists. The country rocks are garnetiferous mica schists with some quartzites, talc-schists and hornblende-schists. The ancients mined to a depth of 120 feet along two

sections up to 120 feet in width on the surface. The Bengal Baragunda Copper Co., formed in 1882, opened up five shafts, the most westerly shaft reached a depth of 330 feet. The average production was 25 tons of copper per year but the maximum was 40 tons per month over a period of 10 years. The ore averaged an assay of 1—15 per cent copper.

In the Patru stream near Golgo ($24^{\circ} 24' : 86^{\circ} 22'$) minute particles of chalcopyrite and galena have been noted in a rock consisting of garnet and diopside.

IRON-ORE.

Lenticles and nodules of iron-ore are found in the Bokaro, Ramgarh and Karanpura coal-fields. These were at one time used by indigenous smelters. They may have a small demand from time to time owing to their special properties, e.g., a certain amount of soft limonite ore is used as a desulphuriser in coking and gas plants.

LIMESTONE.

Isolated patches of limestone occur along a belt extending east and west parallel with the coal-fields between Ramgarh and Palamau. These are associated with schists and dip at a steep angle and appear to persist to some depth. In consequence of the steep angle of dip, the overhead cost increases with quarrying. They are generally low in magnesia but many are high in silica. The cement works at Khalari uses this limestone. The limestone areas now being worked in the Damodar valley are as given below :—

Bundu-Basaria ($23^{\circ} 40' : 85^{\circ} 23'—85^{\circ} 26'$).—The belt of limestone has a width varying from 500 to 1,200 feet. The limestone is inter-bedded with the schists but thick sub-zones of good limestone are available for development. Large reserves are available for the manufacture of lime and cement. At present the limestone is used for local lime manufactured by the Karanpura Development Co., Ltd.

Kurkuta Religara ($23^{\circ} 43' : 85^{\circ} 21'—85^{\circ} 22'$).—The strike of the zone varies from east-west to north-east—south-west and the dips are high to the north and north-west. There is inter-banding between thick sub-zones of good limestone and schists, and the main limestone sub-zone is succeeded by a thick group of calcareous schists. The average quality of the limestone is superior to that at Bundu, and there are large reserves for the manufacture of cement and lime and for use as flux. The area has not yet been developed.

Lapanga-Bhurkunda-Kursa ($23^{\circ} 38' : 85^{\circ} 21' - 85^{\circ} 23'$).—The direction of strike is variable but the main trend is north-west—south-east with high dips to the north-east. Exposures of limestone are fairly widespread but they represent only local bands and lenticles within thick masses of schists. Some are of good quality but most are poor.

Hosir-Bachra-Dundu-Ray ($23^{\circ} 40' : 85^{\circ} 03' - 85^{\circ} 07'$).—Part of this is in Ranchi district. Strike of the zone is east-west, and the width varies from 800 to 1,200 feet. Dips are steeply to the north. The limestone is interbedded with calcareous schists, but the main mass, which forms hills in some places (in the Hosir-Bachra section) is of good quality suitable for cement manufacture. In the western or Dundu-Ray section of the zone, beds of calcareous schists become much more numerous. Here it is being developed by the National Cement Mines and Industries, Ltd., for the manufacture of lime at Ray.

MICA.

The mica industry of Bihar is of great importance not only to Bihar, but to India and the World. Seventy per cent of the world's sheet mica comes from India and eighty per cent of India's total production of mica comes from the Bihar mica belt, the greater part of which is situated in the Hazaribagh district. The ruby mica of Bihar is regarded as the best mica for electrical purposes.

About 25 per cent of the mica raised in the Bihar mica belt was produced from '*Uparchala*' or surface workings, about 20 feet in depth. Up till 1918, most of the mica was obtained from those surface workings or shallow mines, many of which were abandoned due to trouble arising from ground water. The problem of getting rid of the ground water was solved later on by the introduction of machinery. The Kodarma Reserve Forest area was thoroughly prospected by '*Uparchala*' mining. '*Uparchala*' mining had given rise to some controversy since many small mica miners abandon the mines filled with debris after scraping off whatever mica is available near the surface. Other authorities are of opinion that '*Uparchala*' mining is an important method of prospecting for mica deposits. When deep pegmatite is proved, systematic mining is undertaken. Stopping commences after the pegmatite has been thoroughly explored by deep mining methods and yields rich quantities of mica.

The veins of mica pegmatite often pinch out along strike and dip, or a barren part of the pegmatite in the middle may divide the mine into two sections. Most of the mines are not more than 300 feet deep but some have reached a depth of 400 to 500 feet. The enriched portions

generally occur between 150—300 feet in depth. Below 300 feet the books of mica become progressively smaller and below 400 feet the pegmatites pass into stringers. The veins may also branch in depth.

The pegmatites carry many accessory minerals in certain places which are of great interest. Felspars occur throughout the mica belt and, where large quantities are available, are suitable for the porcelain industry. Pale green apatite occurs abundantly in some pegmatite veins (Lakamandwa) where the surrounding schists are also impregnated with it. Leucopyrite and lollingite are found in lumps in some places in the pegmatites, for example, leucopyrite has been found near Dabur, south of Gawan, in the Sakri river, and at a place one mile south-west of Dhab. Crystals of beryl, both large and small, have been found in the pegmatites but most of them were thrown into the dump heaps. It may be possible to make good collections if the miners learn to recognize the minerals. Specimens of columbite were found in 1897 in the Kodarma Reserve Forest. Garnets are common throughout the district. Transparent tourmaline associated with blue indicolite and lepidolite has been found near Manimundar ($24^{\circ} 37' : 85^{\circ} 52'$).

FIRE CLAY.

Fire clay occurs at Emlo ($23^{\circ} 48' : 86^{\circ} 00'$) associated with the Gondwana coal beds.

STEATITE OR SOAPSTONE.

Deposits of steatite are worked at a place west of Parasnath. Bricks cut from this material have been used in the alkali furnaces in paper mills.

MINERAL OCCURRENCES OF LITTLE ECONOMIC VALUE.

Antimony.—Deposits of lead ore were worked for antimony towards the close of the 18th century at Hisatu ($24^{\circ} 00' : 85^{\circ} 01'$).

Lead ore was discovered by Motte and Farquhar in 1777. The mine was re-discovered by Ouseley in 1842, and specimens assayed 47.02 per cent lead and 4.7 per cent antimony with no trace of silver.

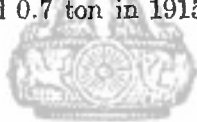
A lead mine is indicated at Nyatand ($24^{\circ} 30' : 85^{\circ} 43'$) on Sherwill's map of Bengal but no particulars are available.

Galena was found associated with copper ore at Baragunda and Mallet noted its occurrence with copper in the Patru stream near Golgo.

Molybdenite.—Rare flakes up to an inch across have been found associated with the zinc lead-copper ores of Mahabank in the Patro river near Golgo in a matrix of coccolite and garnet. Some rare scales have been seen in the Baraganda copper mine with copper and iron pyrites and sphalerite in chlorite and mica-schists.

Tin ore (Cassiterite).—Cassiterite has been found in several places. Within the mica belt, cassiterite has been found near Pihra ($24^{\circ} 39' : 85^{\circ} 49'$) as small grains in a dyke of lepidolite granite; at Simratanri ($24^{\circ} 39' : 85^{\circ} 47'$) in a lens of granite intruded into mica-schist; and at Chappatand ($24^{\circ} 40' : 86^{\circ} 57'$) in a cassiterite-granulite described by Fermor.

Another occurrence at Purgo ($24^{\circ} 10' : 86^{\circ} 08'$) in Palganj near Parasnath was noted by Mc. Clelland in 1849. It was smelted in village iron furnaces. According to Fermor, a thin layer of cassiterite-granulite up to six inches thick and containing 30 to 50 per cent of cassiterite occurs in a microcline granite which also contains scattered grains of cassiterite specially close to the cassiterite-granulite. Several attempts were made by Europeans to work the deposit but without success. In 1909-10 the surface was worked with the production of 3 cwts. of tin during each of the years 1909-10, a further 0.1 cwt. in 1914, and 0.7 ton in 1915 from village iron furnaces.



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CHAPTER III.

FORESTS.

Hazaribagh is a predominantly forest district, for out of its total area of 7,016 square miles as much as 3,051 square miles is covered with demarcated forest. The distribution of the forests by Civil Subdivisions is as follows :—

Sadar Civil Subdivision—1,394 square miles.

Chatra Civil Subdivision—1,049 square miles.

Giridih Civil Subdivision—608 square miles.

There is perhaps no other district in this State in which the economy of the people is so inextricably bound up with forest. As a general rule, wherever forest exists it is situated more or less in isolation away from the bulk of human population. For example, in the Shahabad district the forest is all tucked away in the extreme south, up and behind the Rohtas Hills; in Champaran the Himalayan foothills account for whatever forest has remained over; even in Singhbhum the best forest occurs in the remotest south-west corner known as the land of seven hundred hills. But in Hazaribagh district the forest is distributed almost uniformly all over. Forest and village occur in a succession though inevitably some areas have been denuded more than the other. In this district, if the forest disappears the village disappears also, or in any case the latter will find most difficult to hold out. The quality or density of a forest is always in inverse ratio of accessibility and this should give a preview of the picture that will be presented hereafter. It may be added that such a distribution of forest and population as is met with in Hazaribagh district, is an ideal condition for the best utilisation of the forest. It is conducive both to the maximum production of revenue and to the conferment of optimum benefits on the local population.

FOREST MANAGEMENT.

Formerly when forest covered most of the land surface and cutting and clearance were considered laudatory nobody naturally cared what happened to it. Cutting went on without let or hindrance. As the population grew more cutting took place. The balance between forest and population continued progressively to tilt more and more on the side of population and the forest eventually reached a state of denudation that caused concern. The Government-owned forests in Kodarma and Bengabad thanas were constituted Reserved or Protected Forests and given protection and scientific management. The rest belonged

to the zamindars and nothing could be done for them. Later, a long time later, a part of the forests belonging to the then Ramgarh estate and under management by Court of Wards, was constituted Reserved Forests by agreement under section 38 of the Indian Forest Act. These forests prospered under scientific management and silvicultural treatment but the rest of the zamindari forests continued to be the prey of the wanton axe. Things thus went on with gradual acceleration of cutting caused by the mounting population. But the crisis was reached during the period of Second World War. An unlimited demand for timber and poles arose from the Defence Department and these forests being the most accessible received the full brunt of the fury of cutting. Indiscriminate fellings went on everywhere and almost all the good timber was cut and removed. Efforts had earlier been made in this district, as elsewhere in Bihar, to induce private forest owners to come to an agreement with Government under the provisions of section 38 of the Indian Forest Act for scientific management of their forests on terms sufficiently advantageous to them. But the owners were not very agreeable. They accordingly held out. There is no element of compulsion in the provisions of section 38 of the Indian Forest Act which rather presupposes the first advance on the part of owner himself. Seeing that the conditions had already deteriorated to a point of almost irretrievable damage to the national property Government had to step in with a compulsive enactment. Thus in the throes of impending calamity to the forests was the Private Forests Act of 1946 born. This was a hundred per cent compulsive Act and provided for the taking over of private forests by Government for management without reference to the owner's wishes, but guaranteeing that the forest would remain the property of the owner and assuring to him total net profits from the forest, after deducting only the actual costs and not charging even commission for the management. The Act also safeguarded the rights of the people and contained provision for settlement of any leases that might be the encumbrance of any given forest at the time of the enactment. This Act was not a day too early and fortunately not too late either. The drastic Forest Act had received a wide publicity during its bill stage and people hurried in all corners to lay by what they could before, as they mistakenly understood, the doors of the forest for ever were locked against them. The owners cut and sold, the villagers cut and stocked or even in sheer spite or on instigation cut and destroyed. Provisions of the Forest Act also proved unequal to the occasion, for over an unavoidable period of formalities the forest almost hung in the air—it was taken away from the owners but not taken over by Government and nobody could effectively protect it. Things were, however, remedied as time went on and the chapter of destruction rapidly came to a close. The Forest Department

officers and men had to work against an overwhelming tide of psychological and physical opposition, both from the owners and the people in general—the owners opposed and spread disaffection against Government and the Forest Department because they did not relish the forests being taken away from their hands; the people opposed because, although they would gain in the long run by the continued existence of the forest, they were restrained from wanton cuttings and were subjected to control and regulation which of course nobody likes. Ultimately in 1950 the Bihar Land Reforms Act came into operation and all the private forests vested in the State. Now the entire forest area in Hazaribagh district is the property of the State. Scientific management has been extended to all the forests.

TOPOGRAPHY.

The entire district is either hilly or undulating. The highest point, namely, 4,481 feet above mean sea level occurs on the Parasnath Hill. The Gawan and Satgawan Hills form the middle-north fringe of the district. At the extreme north-west occurs the hilly or highly eroded terrain of Pratappur thana and part of Simaria and Chatra thanas. In the south occurs Chutupalu Hill which divides this district from Ranchi district. In the middle south-west Barkagaon and Tandwa Hills present a special feature of sheer precipice capped by extensive softly rolling plateau. The quality and extent of forest on this plateau are particularly heartening. This has been so from the sheer difficulty of extraction from these hills. Such plateau also exists on Jhumra Pahar near Dania railway station. Here also the state of timber and bamboo crop is far superior to that found on the lower aspects or on the plain land. The Parasnath Hill stands out as a great sentinel commanding a large landscape. Forests occur on all these hills, their density and quality naturally varying with the ease or difficulty of access. On the undulations also, interspersed with villages and fields, forests occur and on the whole the district is a perfect blend of forest and agriculture.

DESCRIPTION OF THE FORESTS.

Sal (*Shorea robusta*) is by far the predominant species of trees in the forests of Hazaribagh district. This species of trees is capable of growing to giant sizes as in Saranda forests of Singhbhum district, commonly attaining 8 feet to 10 feet in girth and sometimes growing up to 14 feet. But in Hazaribagh district indiscriminate cuttings over a long period and exposure of soil to the desiccating sun have rendered conditions unfavourable to growth of the maximum potentiality. Pole size, namely, $1\frac{1}{2}$ to $2\frac{1}{2}$ feet in girth, is about the commonest but over extensive areas of the more accessible terrain, chiefly the plateau and plain land, only saplings exist. Larger trees, commonly 3 feet to

4 feet in girth, occur on the plateau of Barkagaon and Tandwa. The Kodarma Reserved Forests are supposed to be in the best state of preservation and here *sal* poles of 2 to 3 feet in girth are quite common. Next in the degree of efficient protection are the ex-Reserved Forests of erstwhile Ramgarh estate. These also contain a good proportion of *sal* poles. Elsewhere chiefly firewood is available. Almost all over outside the Kodarma and Khurchutta Reserves there are high stumps with pollard shoots which unmistakably indicate wanton and destructive cuttings in the past. These forests will take time for their rehabilitation. But once they are put in shape they will form a most valuable national property vital to the population of the district. Forest is destroyed not only by the amount of cutting but also—and sometimes this is more important—by the quality and manner of cutting. Every tree in the forest grows every day and at the end of the year there is a certain quantity of accumulated increment of the entire forest. If this increment alone is taken annually it will be the interest or dividend earned by an investment and will not damage the capital of the forest property. But how to take out this annual increment calls for the science and practice of silviculture. For instance, there may be a congested group of trees, one tree competing with the other for light and nutrition. Here one or two trees can easily be cut away by which not only a certain quantity of timber will become available but also the resultant stand will benefit by the release of tension of competition. On the other hand there may be only one tree standing in the middle of a small blank space. If this tree is cut away then there will be no source of supply of seeds for the blank area to naturally fill itself up and turn into forest. Thus it will be understood that whereas no damage has been done by taking away two or three trees from a congested group, much damage has been done by taking away even one tree from a blank space. Secondly, if *sal* pole is cut close to the ground its root system sends up fresh vigorous coppice shoot which in time replaces the cut tree or even produces a better tree. But if the same pole be cut high, say at a height of 4 feet or so which villagers commonly do, straight coppice shoot will not emerge from the ground level but only thin shoots will grow from the high stump and these will never grow into good trees. Thus only by the wrong manner of cutting a good tree may be destroyed for ever. The Forest Department is engaged in the task of teaching, practising, and publicising the correct methods of silviculture and in associating the people with the work of proper forest conservation.

The *sal* tree is associated with various other species of trees whose names will be given hereafter. But one of the most important associates is bamboo (*Dendrocalamus strictus*). The bamboo areas are mostly confined to the hills and undulations in between. Bamboo is not

uniformly distributed throughout the district but occurs in special localities. The chief locality is the region of forests extending from Chatra to Pratappur, thence to Lawalong and Semaria; from Chatra to Dantar and beyond; the Jhumra Hill and undulating forests from there to near the Hazaribagh-Bagodar road and Hazaribagh-Ranchi road. The Kodarma Reserved Forests also contain a fairly good quality of bamboos. Part of Barkagaon and Hendgir forests also contain bamboos. On the northern slope of Parasnath, and specially the part of it known as Phulibagan, has on it perhaps the best bamboos in the district. The southern slope also has extensive occurrence of bamboo but the clumps are all reduced to a state of utter poverty and only thin shoots, often in helpless congested mass, are all that are available at present. The hills to the south of Grand Trunk Road between Barhi and Barkatha also contain a fair sprinkling of bamboos, but these are thin and poor. The forest between Chauparan and Dhanva also contain a proportion of bamboos. Elsewhere the occurrence of bamboo is not appreciable. The entire bamboo area needs rehabilitation by cultural aids. The clumps are mostly congested and not in a position to develop to their best without proper treatment. People in the past cut the bamboos at heights of 3 to 5 feet from the ground and these stumps are dead and add to the baffling congestion. The paper mills have of late been taking these stumps and from this impetus the congestion is being cleared. In course of time the bamboo areas will prove very valuable economically and help industrial development.

Next in importance, or perhaps as important as bamboo, is *khair* (*Acacia catechu*). From the chips of its heart wood a decoction is prepared which on concentration and solidification turns into 'kath' or catechu. *Khair* trees occur over much vaster area than bamboo and chiefly on the eroded expanse of the countryside. Larger trees have all been cut away and what is left is pollard shoots and thinner stems. From these also *kath* in restricted quantity is annually prepared, chiefly in the localities of Chatra. But it will take sometime for *khair* area to produce economically exploitable trees. *Kath* industry is a sizeable enterprise of employment though seasonal. *Khair* trees are very common in the Chatra subdivision.

Another tree of very common occurrence in the hilly parts of the forest is *salai* (*Boswellia serrata*). It is a soft-wood species but the timber in planks splits and is therefore much inferior to *simul* (*Salmalia malabarica*) for the packing industry. *Simul*, however, is fast reaching a state of extinction because it has been very extensively cut out both for the match factories and for packing purposes generally. *Salai*

therefore has to take its place and is already coming to the front. During the last World War a vast quantity of *salai* planks had been supplied from the Kodarma Reserved Forest. In most of the accessible areas this species occurs only in pole stage, and will take some time to develop into use for packing industry.

Mahua (*Madhuca latifolia*, Syn. *Bassia latifolia*) is another tree that commonly occurs in this forest, particularly on the fringes. Its distribution is specially plentiful in the Huntergunj and Pratappur thanas of Chatra subdivision where *mahua* flower is much prized as an item almost of staple food for the poorer class for a part of the year. Elsewhere also the people supplement their food by *mahua* flower and the rest goes to the distilleries. Its seed also yields useful oil. The local population use it sometimes for cooking purposes or for lighting and the trade uses it in the soap industry. With all its usefulness, however, this tree is looked upon with disfavour by the forest conservationist from its unfortunate association with destructive forest fires. For facilitating collection of *mahua* flowers the villagers set fire to the thick litter of dry leaves for prior to flowering the tree sheds all its leaves. Unless the leaves are removed the corolla will get lost in the thick layer, so it becomes necessary to clear the ground underneath the tree. Sweeping will also achieve the purpose but burning is easier. The burning has the additional advantage of turning the ground black against which the *mahua* corolla shows up most prominently. So far there would be no objection, but the villager commonly after setting fire does not tarry to extinguish; he walks away unconcerned while the fire spreads in whichever direction it finds a bridge of dry leaves. Forest fires are very destructive because in addition to the damage they cause to the vegetation they destroy the potentialities of forest floor for its effective role in soil conservation and flood prevention. The Forest Department have, therefore, of late started the process of departmentally burning away under strict control the dry leaves under every *mahua* tree in or on the fringe of the forest.

Palas (*Butea frondosa*) also occurs plentifully in restricted localities, chiefly in Chatra Subdivision. It is an important species for cultivation of lac. Lac industry has not yet been taken up seriously in Hazaribagh district but the potentialities exist.

Kusum (*Schleichera trijuga*) is another important lac-host but it occurs scattered about and not in groups or patches like *palas*. Kusmi lac is about the best in quality. Trees of *harra* (*Terminalia chebula*), *bahera* (*Terminalia balerica*), and *amla* (*Phyllanthus officinalis*) jointly yield the well known myrobalans of trade. These myrobalans are used chiefly for tanning industry and there is a sizable export trade in this

commodity. Myrobalans also are used in restricted quantities in Ayurvedic medicinal system for manufacture of 'triphala', a decoction used as a purgative.

Sabai grass (*Eulaliopsis binata*) also occurs, more plentifully in Barkagaon, Tandwa, and Semaria thanas than elsewhere. Out of it ropes and strings are manufactured and in bulk it goes to the paper mills for manufacture of paper.

Kend (*Diospyros melanoxylon*) is another species of almost universal occurrence. It is prized for its fruit which the local people eat with relish. It ripens in April-May when the paddy stock runs short and thus comes in handy as a supplement of food. The timber of this tree yields ebony which is much fancied in furniture trade, but only big trees yield ebony in substantial quantity for it comes out of the very core of heart wood. Big trees capable of yielding ebony are not common.

Asan (*Terminalia tomentosa*) is utilised for growing tassar cocoon. *Sal* is also a secondary species for cocoon rearing.

Piar (*Buchanania latifolia*) is also quite common and is prized for its fruit. The pulp is eaten and the kernel of the seed is used in the preparation of sweets.

Bhelwa (*Semecarpus anacardium*) fruits when ripe and dry are also eaten, specially in the forests of Dumri area. The seed is the common *dhobi's* nut—it yields an acrid juice which indelibly marks the cloth.

Forests are quite dense in the remoter parts but on the undulations or plain land where the bulk of habitation occurs the forests inevitably are thinner. In parts, however, as in the Birni and Dhanwar thanas of Giridih Subdivision, there has been extensive denudation. In such localities forest produce is hard to come by and cow-dung which could and should have gone to the fields as a manure is diverted to the kitchen. In certain other areas, for example, in Chauparan thana, the land is still covered with vegetation but mile after mile there are only scrubs and thorns and high stumps with pollard shoots.

The names of a few of the other common species that generally occur in the forest of Hazaribagh district are—*paisar* (*Petrocarpus marsupium*), *gamhar* (*Gmelina arborea*), *bhurkund* (*Hymenodictyon excelsum*), *semul* (*Salmelia malabaricum*), *karam* (*Adina cordifolia*), *bel* (*Aegle marmelos*), *matasur* (*Antidesma diandrum*), *siris* (*Albizzia odoritissima* and *A. lebbeck*), *dhanra* (*Anogeissus latifolia*), *jaba* (*Bauhinia retusa*), *kachnar* (*Bauhinia variegata*), *kasai* (*Bridelia retusa*)

bhuikusmi (*Careya arborea*), *sonari* (*Cassia fistula*), *putri* (*Croton oblongifolius*), *makarkend* (*Diospyros embryopteris*), *biskend* (*D. montana*), *ratan gurur* (*Eleodendron glaucum*), *jamun* (*Eugenia jambolana*), *merle* (*Flaucortia romantchi*), *papra* (*Gardenia latifolia*), *koraija* or *kurchi* (*Holarrhena antidysenterica*), *jirhul* (*Indigofera hamiltonii*), *bankapasia* (*Kydia calycina*), *kamla* (*Mallotus philippinensis*) *doka* (*Odina wodier*), *fenfena* (*Oxoxylon indicum*), *keponjha* (*Sterculia urens*), *rohin* (*Soymida febrifuja*), *roronga* (*Trema orientalis*), *dhabai* (*Woodfordia fruticosa*), *ber* (*Zizyphus jujuba*), *kathber* (*Z. zylopyra*), *khajur* (*Phoenix humilis*), *koisan* (*Antidesma ghaesembilla*), *sidha* (*Lagerstroennia parviflora*), *kahua* (*Terminalia arjuna*) *chireta* (*Swertia angustifolia*), *simjangha* or *marukata* (*Vitex penduncularis*), *maulan* (*Bauhinia vahlii*), *parjan* (*Ougenia dalbergioides*).

RIGHTS AND CONCESSIONS.

Most of these forests are burdened with rights. The general rule is that the inhabitants of a village within the cadastral boundaries of which the forest is situated have the right to take for their own *bona fide* use, but not for sale or barter, whatever forest produce they may require. The management of forests is therefore so designed that the requirements of these right-holders are first implemented and the surplus is sold for use of those who have no rights or for export to other markets. Certain forests, for example, the Kodarma Reserved Forests, have no rights in them because sufficient area of forest has already been set apart for the use of right-holders.

UTILISATION OF FOREST PRODUCE.

The commonest demand on these forests is for firewood, fencing material, poles for house-building and timber for agricultural implements, etc. The mica mines of Kodarma area consume an appreciable quantity of *sal* poles. The coal-fields also call for a large number of pit props and tram-line sleepers. Out of the surplus left over after meeting the local demand, timber, poles, firewood, and bamboos are exported to different markets. Firewood goes to Patna, Banaras, and even to the other towns of Uttar Pradesh as far as Firozabad. There is not much timber in the forest and the bulk of the output is made up of poles. Out of the bamboo baskets, *chicks*, mats, etc., are made and sold in the local hats. The people also utilise bamboos for their domestic requirements and the surplus goes to the paper mills of Dalmianagar and Calcutta. *Katha* is manufactured chiefly in Chatra area. Out of the climbers *mahulan* (*Bauhinia vahlii*) ropes and strings are manufactured. Toys and utensils are made out of the wood of certain species, chiefly *papra* (*Gardenia latifolia*). The forests grow grass used by the cattle

and part of which is also cut and utilised for stall-feeding in restricted quantities. *Sabai* grass is exported for paper manufacture. There is a sizable trade in myrobalans, particularly in Giridih locality, but it can be further encouraged and extended to other localities for *harra*, *bahera* and *amla* trees are quite common all over. Lac growing is not practised in sufficient degree in this district but potentialities exist to sustain a large scale industry, as *palas* and *kusum* trees are plentiful. The rearing of *tassar* cocoons is done in a small measure but this too can be extended. The forests yield varieties of edible fruits and roots on which the local people subsist for part of the year, specially when there is failure of crop. The chief fruits are *kend*, *piar*, *ber*, *bhelwa*, wild *jamun*, *karaunda*, *bel*, etc., and there are several tubers which are known as *bun-caloo*.

Simul cotton is collected in places and is locally utilised or sold. There is also a store of medicinal produce like *chireta*, *kalmegh*, *kurchi*, *lodh*, bark of *arjun*, *satmool* *anantmool*, etc., but there is no organised industry for collection and utilisation of these.

Kendu leaf exploitation for manufacture of *biri* is a large-scale industry in the district, specially in the Chatra subdivision. This provides a large volume of employment and also brings in an appreciable revenue to Government.

ADMINISTRATION.

For management purposes the forests of Hazaribagh district are divided into three Forest Divisions, namely, Hazaribagh Forest Division, Chatra Forest Division, and Giridih Forest Division whose territorial jurisdictions happen at present to coincide with the jurisdiction of the respective Civil Subdivisions. A fourth Forest Division with headquarters at Kodarma is shortly going to be started whose jurisdiction will include a part of the forests in the Hazaribagh Division and a part of the area of present Chatra Division. At the head of each Forest Division is a Deputy Conservator of Forests. There are a number of Ranges under each Forest Division—8 under Hazaribagh Division, 5 under Chatra Division, and 5 under Giridih Division. Each Forest Range is manned by a Forest Ranger or experienced Forester. A Forest Range in turn is composed of several Beats each of which is in charge of a Forester. Under a Beat there are a number of sub-beats manned by Forest Guards. In addition seasonal work-charged staff like Coupe Overseers, Coupe Guards, Naka Muharrirs, Naka Guards, Amins and Inspector Amins are also employed.

SCIENTIFIC MANAGEMENT OF THE FORESTS.

All the forests are managed under a scientific silvicultural system. Working plans are compiled after a detailed examination of all aspects of the forest, namely, the quality and density of the forest, the existing species and size of trees, configuration of the ground, the potentialities of the soil, rights and concessions, demand of the market, financial considerations, etc. The forests are grouped into a number of felling series and each felling series is generally divided into 40 parts, each such part being called the annual coupe. Felling in one year is carried out only in one coupe in each felling series. The principle behind it is that the quantity of forest produce available in each coupe represents the annual increment of that felling series and being in the nature of interest or dividend can be taken out without encroachment on the capital. The coupe is demarcated on the ground and is properly delimited by means of cleared lines and coaltar rings. A number of standards, generally 8 to 10 per acre, are retained by placing on them distinctive marks with serial numbers. These standards are not cut while the rest of the trees in the coupe are clear-felled. These standards serve the dual purpose of helping by their seed to regenerate blank areas around them or to supplement the deficient regeneration; they also provide a proportion of larger timber because while the rest of the forest is cut after 40 years these standards are felled after 80 years. This 40 year period is called the rotation. In felling the produce of the coupe it is strictly enjoined that the cutting must be done within 6 inches of the ground level because then alone will sound coppice shoots emerge from the root and replace the tree that has been cut out; if high cutting is done, only thin pollard shoots will come out and the forest will gradually be impoverished or ruined. In the following year the young plants are given silvicultural operation called cleaning. In this the grass and inferior species which might be suppressing the young plant of valuable species are cut away to give the latter a better chance of development. Climbers are also cut away since they retard the growth of trees and the more sturdy ones deform the bole and damage the timber. Plants of inferior species interfering with those of superior species are also cut out. This cleaning may have to be repeated in the second and third years also. In the tenth year a thinning operation is carried out which consists of spacing the plants properly so that each may get its proper share of sunlight and nutrition.

Bamboos are cut on a four year cutting cycle. Separate and overlapping felling series are formed for the management of bamboos. This means that in a coupe of timber, bamboos will not be cut nor will timber be cut in a bamboo coupe. Similarly for the exploitation of *simul* or *salai* or *khair* special overlapping felling series are formed.

The aim is to ensure equal sustained yield of each variety of produce, this yield representing the total annual increment of the forest in the shape of interest. Actually less than the full measure of the interest is taken out, for many standards are left behind. Thus under scientific management the forest property instead of diminishing in quantity or area actually improves as time goes on.

FOREST ROADS.

The Forest Department has to construct its own roads for purposes of extraction of the forest produce and also for inspection. The following forest roads exist at present.

Name of road.	Length.	Type of road.	Whether motorable.	Remarks.
Jori-Pratappur Road.	11 miles	Fair-weather	Yes	Lies in Pratappur P.-S.
Pitiz-Gangpur Road.	7 miles	Ditto	Do.	Lies in Chatra P.-S.
Pratappur-Raniganj Road.	13½ miles	Ditto	Do.	Lies in Pratappur P.-S.
Surhad-Khapuwani Road.	3¾ miles	Ditto	Do.	Lies in Chatra P.-S.
Chatra-Sail-Bajdag Road.	4½ miles	Ditto	Do.	Ditto.

In addition the Public Works Department and District Board Roads passing through or near the forest are naturally made use of.

FOREST REST HOUSES.

The following Forest Rest Houses exist today :—

- (1) Kodarma Forest Rest House at Kodarma.
- (2) Meghatory Forest Rest House—10 miles from Kodarma.
- (3) Bengabad Forest Rest House—10 miles north of Giridih.
- (4) Dhab Forest Rest House—10 miles from Domchanch, and 17 miles from Kodarma.
- (5) Gajhandi Forest Rest House—near Gajhandi railway station about 12 miles from Kodarma railway station.

- (6) Hendgir Forest Rest House—near Hendgir railway station.
- (7) Dania Forest Rest House—near Dania railway station.
- (8) Gomia Forest Rest House—near Gomia railway station.
- (9) Pratappur Forest Rest House—at Pratappur in Chatra subdivision.
- (10) Bermo Forest Rest House—at Bermo in Giridih subdivision.

REVENUE.

The revenue derived from the forests in Hazaribagh district from the year 1945 to 1954 is as follows :—

Year.	Rupees.
1945-46	1,55,490
1946-47	1,08,402
1947-48	1,86,539
1948-49	2,11,711
1949-50	6,57,795
1950-51	7,05,340
1951-52	6,79,589
1952-53	6,05,599
1953-54	9,14,455

This revenue is bound to increase as years go by and as the forests improve by silvicultural treatment. There is a vast possibility for expansion of revenue from products other than wood, for example, *lac*, *tassar* cocoons, medicinal plants, etc. If cottage industries based on forest products are encouraged they will open up wide avenues of employment.

AFFORESTATION.

As has been said in the foregoing paragraph large stretches of land which once were covered with fine forests have since decades been completely denuded of all vegetation and stand out as desolate brown wastes on which not even *grasses* can grow. Large parts of such wastes have been gullied and deep ravines formed therein. For reclothing such denuded land and for arresting the progress of gully formation, afforestation schemes have been taken up. Afforestation has only recently started and has been carried out at Pathaldiha, Chandroh, Birjamo near Kodarma, Motileda near Giridih and Latakhi near Jamua. The scheme is to afforest 12,000 acres annually. The major part of the area under afforestation scheme lies in the catchment of Barakar and Konar rivers. The cost of afforestation varies from Rs. 125 to Rs. 180

per acre. The afforestation work includes anti-erosion and gully reclamation measures also. Various species of trees and bamboos, and *sabai* grass are grown on the land according to its fitness for particular species. The immediate need is to grow fuel wood by which the cow-dung may be released from the kitchen for the fields. At present two special Afforestation Divisions are functioning in the district, one having its headquarters at Hazaribagh and the other at Giridih.

NATIONAL PARK.

For preservation of the fauna and to enable visitors to view wild animals in their state of freedom a national park has been constituted within the Hazaribagh district. It starts from about 10 miles of Hazaribagh town on the Hazaribagh-Barhi road and extends to east and west, but mostly westward for several miles. The total area is about 150 square miles with a core of right-free forest covering 80 square miles. Shooting is strictly prohibited in the entire 150 square miles, but while the inner core of 80 square miles will be preserved in the state of nature and no cutting of tree or disturbance of the flora in any manner will be permitted, in the outer fringe of 70 square miles normal exploitation may take place. A number of watch-towers to view the forest and wild life have been constructed and a Forest Rest House built at Rajderwa, 18 miles from Hazaribagh. The National Park is a beauty spot. A number of dams have been built and more are in process of construction. The purpose is to create pools of water where the animals may drink in summer. Towers generally have been constructed above these pools so that in summer visitors may sit on these towers and easily see the animals that will come to drink water. Artificial salt-licks have also been made for the animals. Roads have been constructed and are being extended. In addition to this National Park the Kodarma Reserved Forests have also been functioning as game sanctuary where shooting is prohibited.

CHAPTER IV.

HISTORY.

ANCIENT PERIOD.

The district of Hazaribagh has been named after the town of Hazaribagh, its present headquarters, which has in turn derived its name from the mango grove at Hazari, one of the villages which make up the town. This village is still on the western edge of the town.⁽¹⁾ In the earliest maps of the district published in 1779 by Major James Rennell, the first Surveyor General of India, the present town appears as Ocunhazari. A print of this map available in the Survey Office, Gulzarbagh, Patna has been included in this book. It owes its existence to the raising of the Ramgarh Battalion about 1780, and the decision to station it permanently near the villages of Okni and Hazari, on the road from Chatra to Ichak, which had become an important place after the Raja of Ramgarh had made it his capital in 1772.⁽²⁾

The district forms the north-eastern portion of the present Chotanagpur Division which, it is generally believed, was in very early times covered with inaccessible hills and forests to which many non-Aryan tribes who refused to surrender to the steadily advancing Aryans, retired at different times. We do not know the name by which the tract was known to the ancient Aryans. All through the long centuries of Hindu rule in India Chotanagpur appears to have remained unmolested, though foreign invaders on rare occasions might have succeeded in exercising nominal overlordship over it. It might have acknowledged for the first time the suzerainty of the great Asura Maharaja, Jarasandha, who is described by the Epic writers as a highly powerful effulgent and preserving Lord Paramount, like the sun, he robbed all other kings of their splendour and obtained the suzerainty of the whole world. It is just possible that Mahapadmanand Ugrasena of Magadha, who waged several wars against the Kshattriyas, ultimately conquered the whole of eastern India including Kalinga and proclaimed himself Ekraat or sole monarch. It is stated that during Asoka (C. 273—C. 232 B.C.) the *Atavi* or Forest States too acknowledged Magadha supremacy, and this may justify the conclusion that Chotanagpur was included in the Mauryan empire at least in his reign.

There are clear evidences to show that this tract was in touch with many other parts of India. There was frequent intercourse between Kashi and Hazaribagh. Parsvanath, the 23rd Jaina Tirthankara, attained *nirvana* at the summit of the Parsvanath Hill in the Hazaribagh district probably in the 8th century B.C.⁽³⁾ After the downfall of the Imperial Mauryas in 185 B.C. King Kharavela of Kalinga led his

army across Chotanagpur and sacked Rajgir and Patliputra. Samudragupta (C. 335—C. 380 A.D.) also must have passed through Chotanagpur when he led his expedition to the Eastern Deccan.(4) The invader (Samudragupta) "marching due south from the capital through Chutia Nagpur, directed the first attack against the kingdom of South Kosala in the valley of the Mahanadi".(5) Itsing, the Chinese traveller, who reached Tamruk in 673 A.D. traversed the uplands of Chutia Nagpur to reach Nalanda and Bodh Gaya.(6)

The various non-Aryan tribes that had settled in Chotanagpur had no kings in the beginning. They were under patriarchs. In course of time as their number increased and as there were regular wars against foreigners, they decided to elect one of their chiefs as king. Most scholars think that kingship in Chotanagpur began soon after the fall of the Imperial Guptas in the 5th century A.D. The family chronicle of the Chotanagpur Raj published in Hindi verse and the traditions of the Mundas agree in stating that the latter voluntarily superseded the son of their own patriarch Madra Munda of Sutiamba (in Ranchi district), in favour of Madra's foster-son, Phani Mukut, in consideration of his superior intelligence and elected him as their king. Phani Mukut, just after his birth, had been found by the side of a tank under the protection of a huge *nag* or serpent. For this reason, his descendants later on called themselves as Nagbanshi or members of the Naga dynasty.

The name 'Nagpur' is probably taken from the Nagbanshis who ruled the country, 'Chota' is a corruption of Chutia, a village on the outskirts of Ranchi where the remains of the old fort of the Nagbanshi Rajas can still be seen. It was one of their earliest capitals. Even in the beginning of the present century this tract was known as Chutia Nagpur. The name 'Chutia' has now been changed into "Chota" probably for the sake of convenience. According to the late Mr. S. C. Roy, "the name Chotanagpur is one of comparatively recent origin and appears to have been first coined by the early British administrators of the country to distinguish it from the other Nagpur possessed by the Marhathas."(7)

MUHAMMADAN PERIOD.

To the Muhammadan historians the whole of Chotanagpur was in the tract which they knew as Jharkhand or forest country. It appears to have remained practically independent throughout the Turko-Afghan rule (1206—1526 A.D.) in India. The Delhi Sultans generally attempted to conquer the accessible parts and stationed their governors and garrisons in cities and strategic centres. The fortress of Rohtas was the farthest limit of actual penetration made by them towards it. *Tarikh-i-Firuz Shahi* of Shamsi-Siraj Afif tells us that Sultan Firuz

Shah Tuglaq, after his second campaign against Bengal (1359-1360 A.D.), marched from Jaunpur against the Rai of Jajnagar (modern Orissa) and after making peace with him, returned by some route through Jharkhand.⁽⁸⁾ From the seventeenth canto of *Sri Chaitanya Charitamrita* we learn that the great Shri Chaitanya, Vaisnav reformer and devotee of Nadia in Bengal (b. 1485 A.D.), on his way to Mathura in the second decade of the 16th century A.D. passed through Jharkhand and made conversions among the aboriginal population. It is also said that Sher Shah passed through Jharkhand while returning from his second attack on Gaur (Bengal) in 1538 A.D. Professor Quanungo mentions that "Sher Shah threaded his way to Rohtas through the jungles of Jharkhand as best he could."⁽⁹⁾

The accession of Akbar to the throne of Delhi in 1556 A.D. opens a new chapter in the history of Chotanagpur or Jharkhand. To the Mughals it was also known as Kukrah. It excited the cupidity of the Mughal Emperors by reason of the report of the diamonds to be found in its rivers. The late Professor Blochmann gave extracts from two Persian works, the *Akbarnamah* and the *Tuzuk-i-Jahangiri*, in an article in the *Journal of the Asiatic Society of Bengal* for 1871 as quoted by Mr. S. C. Roy in his *Mundas and Their Country*, page 151, which show that Kukrah remained independent Muslim suzerainty till about the thirtieth year of the reign of Emperor Akbar. In 1585 A.D. Akbar sent an expedition commanded by Shahabaz Khan Turbati who reduced the Raja of Chotanagpur to the position of a tributary. In 1591 A.D. this Raja took part in the Mughal expedition to Orissa. During this second campaign against the rebellious Afghan chiefs of Orissa in 1591-92 A.D. Man Singh, then Akbar's Viceroy of Bengal and Bihar, set out from Rohtasgarh and ordered all the Bihar troops to proceed "by the western road called the Jarcond route, to Midnapore,"⁽¹⁰⁾ while he himself went by the usual way down the Ganges. It is mentioned in the *Ain-i-Akbari* that Chotanagpur or Kukrah was included in the Subah of Bihar. .

In 1616 A.D. Ibrahim Khan Fatah Jung, the brother of Queen Noorjahan and the then Governor of Bihar, under Jahangir, invaded Kukrah which had, it seems, regained independence during the disturbances that followed the death of Akbar in 1605 A.D., defeated and captured Durjan Sal, the 46th Raja of Chotanagpur who was deprived of all his riches and later on, imprisoned in the fort of Gwalior for twelve years, at the end of which his success in distinguishing a real from a false diamond was rewarded with his release and restoration to his former dignity. The annual tribute to be paid by him was fixed at Rs. 6,000. In 1632 A.D. Chotanagpur was given out as a *jagir* to the Governor at

Patna in return for an annual payment of Rs. 1,86,000. This was raised to Rs. 1,61,000 in 1636 A.D.

In the reign of Muhammad Shah (1719—1748 A.D.), in 1724 A.D., Sarbuland Khan, the Governor of Bihar, marched against the Raja of Chotanagpur and without a struggle obtained his submission and he returned with a huge amount in cash and diamonds. Tribute was afterwards withheld, and in 1731 A.D. Fakhrud Dowlah, the then Governor of Bihar, came with a large army. He met with a considerable resistance, and was glad to compromise his claims by receiving Rs. 12,000 from the Raja of Ramgarh who owed allegiance to the Raja of Chotanagpur. In 1735 A.D., Alivardi Khan with some difficulty enforced this payment and it was continued afterwards till the British occupied the country.⁽¹¹⁾

During the Muhammadan period, Ramgarh, Kunda, Kendi, Chai and Kharagdiha were the chief states in the area now known as the Hazaribagh district. The founder of the Ramgarh Raj was one Bagdeo Singh who along with his elder brother, Singdeo Singh, was in the service of the Raja of Chotanagpur. In course of time, they quarrelled with their lord and with a body of adventurers came to pargana Karanpura (i.e., thana Barkagaon), defeated the local Raja, one Kapper Deo and took possession of the said pargana. They gradually conquered over twenty-one other parganas. Bagdeo Singh became their Raja at about 1368 A.D. with Sisia as capital. It was later on transferred to Urda, then to Badam and then to Ramgarh. Hemat Singh, the sixth Raja of the dynasty, invited a mason from Patna to build a fortified residence at Badam. His residence still stands in partial ruin at Badam. The doorway has an inscription that it was built for him in 1642 A.D. by a Patna builder. In the neighbourhood is Mahudi Hill which contains some sandstone caves which were excavated for Hindu ascetics. One of them was made at about 1660 A.D. It was probably due to the inconvenient proximity of Badam to the route by which the Muhammadans reached Chotanagpur, that the capital was transferred from there to Ramgarh, thirty miles east in 1670 A.D.

The Kunda estate was founded by one Ram Singh, a personal servant of the Emperor Aurangzeb. In 1669 A.D. he was granted a *thanadari jagir* by Daud Khan and Mangal Khan, subordinates of a subordinate of that emperor, "for the care and guarding of the roads".⁽¹²⁾ He was compelled to take a *sanad* from them "to guard the four passes of Babaltar, Pinjri, Banwadih and Nagdarra from the inroads of the Marathas, Bargis and Pindaris."

The early history of Kendi and Chai is not known. At about 1770 A.D. the former was reduced by the Muhammadans to the position

of a zamindari. Chai was subjugated by Mukund Singh of Ramgarh about 1770 A.D. and was partitioned among five chieftains of whom apparently four paid tribute to the fifth, Raja Lal Khan of Jagodih.

It is said that Kharagdiha was founded in the 15th century A.D. by one Hansraj Bhut Deo who came from Southern India, expelled a Raja of the Bandawat caste, and conquered for himself a kingdom in Gaya and Hazaribagh, 600 miles long. The family intermarried with the Babhan zamindars of North Bihar. Direct interference by the Muhammadans in its internal affairs is not heard of prior to 1765 A.D. in which year Akbar Ali Khan, a son of Kamgar Khan, zamindar of Narhat Samai in eastern Gaya, carried the attack on Raja Mod Narayan Deo into his last possessions in Hazaribagh district, and expelled him from Kharagdiha. Mod Narayan and his son died in exile at Ramgarh, but in 1774 A.D. his grandson, Girwar Narayan Deo, assisted the British in expelling Akbar Ali Khan.

The Raja of Ramgarh proved hostile to Alivardi Khan, Subadar of Bengal, Bihar and Orissa. In 1740 A.D., the latter sent a special expedition under the command of Hidayat Ali Khan, the father of Gulam Hussain, the Patna historian and author of *Siyar-ul-mutakherin* to bring the refractory Raja of the jungly district of Ramgarh under subjection. Hidayat Ali Khan, with the co-operation of Raja Sundar Singh and Raja Jaikisan Singh, both zamindars of Palamau, and the zamindars of Seres, Cotomba and Sherghati, brought under subjection the powerful Hindu Raja of Ramgarh.

BRITISH PERIOD.

The year 1765 A.D. opens a fresh chapter in the history of Chotanagpur. On 12th August 1765, Emperor Shah Alam II granted the Dewani of Bengal, Bihar and Orissa to the British East India Company. As Chotanagpur formed a part of Bihar, the company now got the right to receive the tribute of Ramgarh, the land revenue of Kharagdiha and Kendi and the services of Kunda.

The actual exercise of the authority by the British, however, began some time later. It seems that the British authorities at Calcutta were, in the beginning, not inclined to take any immediate and strong measures against the different Rajas of Chotanagpur, although they were creating disturbance in matters of revenue collection. The letter of the 4th August 1769 A.D. from Mr. T. Rumbold of Patna to the President and Governor at Calcutta clearly indicates that the latter had issued strict orders not to make any attempt in Ramgarh and Palamau (*Select Committee*, 1769, page 432). It was only in 1769 A.D. that the British first came into contact with the district. In that year, a British Officer

of the name of Captain Camac appeared to establish some sort of order in the " Junglebury district " which was the name of Hazaribagh. The revival of the Maratha power under Madhao Rao (1761-1762) once more threatened both Bihar and Bengal. The Marathas had, in the past, made Chotanagpur and specially Ramgarh, as one of their bases of invasion on Bihar and Bengal. The British realised this fact and they now seriously considered the question of bringing the different Rajas of Chotanagpur under control.

Captain Camac first subdued the Rajas of Kharagdiha and Kunda. In 1771 he was made Military Collector of Ramgarh district which included Nagpur and Palamau and Chakye as well as the present district of Hazaribagh and had his headquarters at Chatra.⁽¹⁸⁾ Next year, he appeared at Kunda on his way to Palamau. Raja Dhrij Narayan Singh of Kunda, the fourth in succession from Ram Singh with whom Daud Khan and Mangal Khan, the two officers of Aurangzeb, had made a settlement, rendered a valuable service to the British in the Palamau campaign and in return, Captain Camac renewed the old agreement according to which Kunda was exempted from paying the land revenue.

The Raja of Ramgarh in those days was Mukund Singh whose behaviour was unpalatable to the new masters, who ultimately decided that either he should give proper security for his future good behaviour and for the payment of a sum of money yearly to the Government or he should be reduced to submission and obedience. In its letter of the 16th September 1771 A.D. addressed to the Hon. John Cartier, President and Governor at Calcutta, the Council of Revenue at Patna, while transmitting copies of three letters from Captain Camac and translation of Persian accounts of Nagpur, Ramgarh and others and complaining of the conduct of Mukund Singh, expressed that " Mukund Singh, the present Ramgarh Raja, has always been very deficient in the payment of his revenue and endeavoured as much as possible to maintain an independence of the Government, and his troops have frequently infested the neighbouring parganas with incursions, if he would give proper security for his future good behaviour and for the payment of a revenue of 20,000 or 30,000 sonaut rupees a year to the Government, it might perhaps be advisable to leave him undisturbed. But if not, we apprehend it would be proper to deprive him of the territories he usurped from Nurrut Samoy and Sherghatty and bring him under subjection, which at this juncture we believe Captain Camac would easily effect and we imagine that these measures would be in any case of Maratha troubles contribute much to the security of the south-east side of this province and of Bauglepore and Beerdwan in the Bengal province. " (O.C. 3rd January 1772, no. 6 (a), pages 16-17).

In his letter (O.C. 3rd January 1772, no. 9) Captain Camac, the Military Collector of Ramgarh, pointed out to the Chief and Comptrolling Council of Revenue at Patna, the vulnerability of the territory of Ramghur, the Raja's unpopularity and his past conduct in opposing Palamau expedition. Regarding the latter he wrote that "there he not only openly assisted the enemy with men and money but had the temerity to cut off the *Harcarrah* who carried the Government's Perwanahs..... He gave passages and protection to a French man with ten or twelve followers who was going from the Dekkan up the country notwithstanding I repeatedly wrote him to send him to me.....the greatest merit with the Raja was his declaring himself an enemy to the English". (15) Captain Camac was convinced that the Raja would make trouble in Palamau and destroy the garrison there and "oblige to abandon that conquest."

During the operations in Palamau Raja Durpnath Shahi of Chotanagpur visited Captain Camac and gave some useful service, whilst on the other hand Raja Mukund Singh of Ramgarh had intrigued to thwart him. Consequently the Raja of Chotanagpur had no difficulty in persuading the Provincial Council at Patna to terminate the arrangement whereby his tribute was being paid through the Raja of Ramgarh. The British were dissatisfied with the latter and soon an action was taken against him. There was a quarrel between Mukund Singh and Tej Singh, a descendant of Singdeo Singh, over the question of succession and the British supported Tej Singh. Lieutenant Goddard attacked Ramgarh; Mukund Singh fled and Tej Singh was installed, not at first as Raja but as *mustajir* and the revenue was fixed at Rs. 30,000, to which in 1777 a *nazrana* of Rs. 10,000 was added. He made Ichak his capital in 1772.

In 1780 Captain Camac was succeeded by Mr. Chapman, who was the first civilian administrator of Chotanagpur. The "conquered provinces" as they were called, were formed into a British district, which included Ramgarh, Kendi, Kunda and Kharagdiha (which together constitute the present Hazaribagh), the whole of Palamau, Chakai on the east of Kharagdiha and Pachet on the east of Ramgarh, and the area round Sherghati. The present district of Ranchi was added under the designation of the Tributary Mahal of Chotanagpur. Mr. Chapman who combined in himself the functions of a Judge, a Magistrate and a Collector of Revenue, held his court alternately at Sherghati (now in the Gaya district) and Chatra (now in the Hazaribagh district) and his authority was enforced by a newly formed native infantry called the Ramgarh Battalion under an European Commander and stationed at Hazaribagh.

In the beginning, the Bengal Regulations were in force in this unwieldy district which covered an area of about 18,000 square miles, without any consideration for the widely different conditions of these parts from that of Bengal. Appeals from the civil and criminal judgments of the District Officer lay to the Governor-General and in revenue matters his work was supervised by a Committee of Revenue in Calcutta. In 1793 A.D. civil and criminal appeals were transferred to a Provincial Court of Appeal in Patna. In 1800 A.D. the Collectorship of Ramgarh was abolished, and the Board of Revenue, by their letter of the 15th April, 1800 to the Collector of Bihar, informed him that the Ramgarh Collectorship was annexed to his district. It appears that the great social reformer and the founder of the Brahmo Samaj Raja Rammohan Roy was in Ramgarh in 1805-06. He went there with Mr. William Digby who was then acting Magistrate and Registrar of Ramgarh. Raja Rammohan Roy was the Sheristedar of the Collectorate and lived both at Chatra and Ramgarh in this capacity. When Mr. William Digby was transferred elsewhere he took Rammohan Roy with him to his new place of work.

It appears that the first phase of British administration of this area proved somewhat a failure. There was only one officer with diverse functions to look after a huge district. A letter written by Captain Roughsedge, commanding the Ramgarh Battalion, to Mr. C. T. Sealy, Magistrate of Ramgarh in May, 1809 A.D. gives a vivid picture of the state of the district in those early days and of the difficulty in enforcing law and order. He writes that "scarcely an individual in the whole country has remained unchargeable with some act of arbitrary violence, the origin of which is to be found in the notion, only now destroyed, of peculiar privileges and exemptions from the usual course of justice." (16)

The unrest in the district was also due to the fact that the administration had been applied unscrupulously over an unwieldy extent of country by officials who had the scantiest knowledge of the people with whom they were dealing. With foreigners from Bengal and Bihar, unacquainted with the customs, land tenure, and the languages or dialects of the people in all the subordinate Government posts and with alien landlords almost supreme in the villages, the British rule was made particularly distasteful to the aboriginal races. In 1789 A.D. there was an insurrection in Tamar which was suppressed by Lieutenant Cooper. In 1811 A.D. there was a rising of the Mundas and Uraons in Chotanagpur and six years later, it had to be brought under the direct administration of the East India Company as part of the Ramgarh district. (14) In 1820 A.D. another rising in Tamar was put down by Major Roughsedge with the help of the Ramgarh Battalion.

In 1831 A.D. there was a more formidable rising which is known as Kol rising. It did not seriously affect Hazaribagh. In his letter of the 13th June, 1832, the Secretary to the Governor-General advised the Government at Fort William to carry out the policy with great caution to avoid disturbances, sanctioned an increase in the Ramgarh Battalion by one thousand men and 200 irregular horses and also suggested to obtain the opinion of the local agent on the expediency of recruiting from the native of that part of the country who were also to be accustomed to that climate (*Foreign Consultation*, 2nd July, nos. 10—12). (15)

The Kol rising was eventually suppressed but it ushered in a new epoch in the administration of the country. The administrative system was entirely changed. By Regulation XIII of 1833 A.D. the Parganas of Ramgarh, Kharagdiha, Kendi and Kunda, which compose the present area of the district, became part of the South-West Frontier Agency and were formed into a Division under the name of Hazaribagh. Hazaribagh was made the administrative headquarters. The Chief Executive Officer at Hazaribagh was now styled the Principal Assistant to the Governor-General's Agent who was in charge of the district of Ramgarh and the Jungle Mahals with the estates of Dhalbhum till then included in Midnapore.

The Ramgarh Battalion at Hazaribagh was enlarged. A letter, dated the 16th July, 1832, from Fort William, Calcutta, asked Captain Wilkinson, Officiating Political Agent, South-West Frontier, to recruit the number of men required to complete the Battalion at Ramgarh, Gaya and Bhagalpur (*Foreign*, 1832, 16th July, page 58). There is evidence to show that the Battalion of Ramgarh occasionally visited Sambalpur area too. Captain Wilkinson, Commandar, the Ramgarh Battalion, camp Sambalpur, informed the Calcutta authorities on the 21st October, 1833, that the Battalion would move out on the 22nd October, 1833, from there and commence marching towards Hazaribagh under Lieutenant Higgan, leaving one Naik and twelve sepoy for the protection of the treasury and the post office (*Foreign*, 1833, consultation 15th Nov., no. 69).

From the creation of the Agency the ordinary laws for the sale of land for debt or arrears of rent were regarded as inapplicable to the province and the rules proposed by Captain Wilkinson (the Agent) provided that no sale or alienation, or even mortgage of hereditary or immovable property was to take place without the sanction of the Agent. In criminal and civil justice the Principal Assistant was guided by Regulation XIII issued in 1833 A.D. It is stated that the police

was brought partially under the control of the Government and in 1837 A.D. the district was divided into twelve thanas, in four of which the police were appointed and paid by Government. In Hazaribagh the cost was divided. The old English Correspondence Volumes in Hazaribagh Collectorate show that the Government thanas in 1837 A.D. were Chatra, Kanha, Chatti, Sirampur and Kharagdiha and the remainder consisted of zamindari thanas at Gawan, Kodarma, Hazaribagh, Ramgarh, Pagar, Hunterganj, Itkhori and Chatra. In 1838 A.D. the new Grand Trunk Road was opened and the old Banaras Road was closed down. The Chatra thana was moved south-east to Gumia and Kanha Chatti was closed, new thanas being opened at Barhi and Bagodar on the new road. (16)

The Rushton's Gazetteer, published in 1841 A.D. mentions that Hazaribagh had European Regiment with two Companies of the native infantry. (17) The tour diaries of Captain Simpson (1852-53 A.D.) found in the old English Correspondence Volumes maintained in the Hazaribagh Record Room, show that Hazaribagh had ceased to be Military station and this had led to the deterioration of some of the roads. The incidence of dacoity on the Grand Trunk Road and some other roads was very high. The Grand Trunk Road played a very important role and a Magistrate was posted at Barhee to control crime. There were bullock-cart trains run by the Government. After some road dacoities had been committed, these bullock-cart trains used to be protected by Sowars with open swords. Simpson's memoirs also indicate that two types of police thanas existed in Hazaribagh—one run by the Government and the other set run by the zamindars. Chuttra, Simpson describes as a city in 1853 A.D. with about twenty thousand population. (16)

In 1853 A.D. Reverend Henry Batson of the Gossner Mission at Ranchi came to Hazaribagh to preach the Christian Gospel among the Santals. He built a station at Singhani on the Hazaribagh-Bagodar Road which has remained till this day the headquarters of the Gossner Mission (Gossner Church since 1919 in this district).

In 1854-55 Mr. Henry Ricketts, a Member of the Board of Revenue, made an inspection tour through Chotanagpur and submitted a report. From this report it appears that the area of the Hazaribagh district was 12,444 square miles with a population of 6,67,585 souls. More than half of the district was held by the Raja of Ramgarh. The criminal justice was administered by the Court of the Principal Assistant at Hazaribagh, the Court of the Deputy Magistrate at Barhee on the Grand Trunk Road and the Court of the Principal Sadar Amin at Gola. The Civil Justice was administered by the Principal Assistant

at Hazaribagh, Principal Sadar Amin at Gola and three Munsifs at Hazaribagh, Chuttra and Kharagdiha. The district had five Government thanas at Chuttra, Burhee, Kharagdiha, Gola and Bagodar. Seven of the zamindari thanas were in the zamindari of the Raja of Ramgarh. The Deputy Magistrate at Burhee controlled the five Government thanas. Incidence of crime was generally high and higher in the zamindari thanas.

As a result of the Report of Mr. Ricketts a further change was introduced in administration. By Act XX of 1854, the designation of the South-West Frontier Agency was changed to Chutia (Chota) Nagpur and it began to be administered as a non-regulation province under the Lieutenant Governor of Bengal. At the same time the title of the Chief Executive Officer was changed from Governor-General's Agent to Commissioner.

In 1855-56 there was a fierce rising of the Santals against the British administration. The ringleaders were Lobia Manjhi, Bairu Manjhi and Arjun Manjhi. Their insurrection in Hazaribagh was connected with the Santal Rising of 1855-57 A.D. in the Bhagalpur Division. The rising was cruelly suppressed and Santal villages were burnt, Santals chased from jungle to jungle and imprisoned. Even Santal women were put to imprisonment. The bow and arrow of the Santals were no match for the guns of the British Army.

MOVEMENT OF 1857-58.

More significant than the Santal Rising was the uprising commonly known as the Movement of 1857-1858. The Ramgarh Battalion consisting of the two companies of the 8th Native Infantry at Hazaribagh decided on the 30th July to start mutiny from the evening of the following day. Captain Simpson, the Deputy Commissioner, got the news of the actual hour fixed for the outbreak from one of his servants. The only safety lay in immediate flight. Captain Simpson, Dr. Dalpratt and Mr. Liebart of Sitagarha hastily set out on foot across the forest towards Ichak which they reached at nightfall. They were hospitably received by the Brahmans of a monastery. They were supplied with horses and after a few hours' rest, they set out for Bagodar.

When the news of the impending outbreak reached Ranchi, Captain Dalton, the Commissioner, at once sent Lieutenant Graham with a detachment of Ramgarh Light Infantry, some cavalry and two guns to disarm the regiments at Hazaribagh. On the way his own infantry mutinied and hurried back to Ranchi to join the Hazaribagh mutineers, who were proceeding to Ranchi by the Old Ranchi Road *via* Badam.

Captain Dalton realised that it was impossible to defend Ranchi and ordered an immediate withdrawal of all the Europeans at Ranchi to Hazaribagh and from there to Bagodar. For a few weeks the remnant of the administration ran from Bagodar. Mr. J. S. Davies, Senior Assistant Commissioner, Lohardaga Division, took the temporary charge of Hazaribagh Division on the 4th August, 1857, and on the 7th August, he informed Captain Dalton that on the 31st July there was the mutiny of the troops at Hazaribagh and the mutineers were proceeding to Ranchi. Mr. Davies found the treasury quite empty and the records partially destroyed. The rebels had carried away with them the treasure. They had also looted the dispensary of the Penitentiary Jail and had carried off both the doctors and nearly all the medicines. The prisoners had escaped. Dalton, however, reoccupied Hazaribagh with the help of Rattray's Sikhs and restored order there.

The insurgents did not receive much support in Hazaribagh and very little at Ranchi. They stayed in Ranchi for over a month and then set out towards the north to join Kunwar Singh. While they were at Chatra, they were attacked and defeated on the 2nd October, 1857, by Major English. Their guns and munitions were captured, 150 of the mutineers were killed and the rest fled towards Sherghati and dispersed. This victory at Chatra really crushed the movement in Hazaribagh district.

The Santals, who had been ruthlessly suppressed in 1855-56 took the opportunity to rise again against the Government. They were very much encouraged by the weakening of British authority. In a letter no. 50, dated the 17th September, 1857, Simpson informed Commissioner, Dalton, that armed Santals had come into a clash with a detachment of 76 Sikhs including 10 men of the Ramgarh Battalion. One Rupu Manjhi was the leader of the Santals. His house was burnt and a reward of Rs. 100 declared for his capture. The Raja of Ramgarh asked for a detachment of troops to be stationed at Gomia and Ramgarh. Without much difficulty the Santal Risings were put down. No special reconciliatory measures, however, were taken to prevent their recurrence. It was decided to raise a levy on Kols and Santals for military police in Hazaribagh and a body of 500 of them was enlisted for this work. (16)

The disturbance that accompanied the insurrections was utilised by the dispossessed Bhuyan Tikaits, who considered the opportunity useful for recovering their lands from the purchasers and occupying them. They received some support from their tenantry.

The rise in 1857 A.D. again brought in some change in the administration. The complete character of non-regulation in this area was partially changed by the extension of the Criminal Procedure Code Act (Act XXV of 1861) to Hazaribagh district along with the other districts of the Chotanagpur Division. But the set up of the administration for Civil Justice continued in the hands of the Agent who had his Regulations till June 15, 1859, when the Civil Procedure Code was extended with a provision that "no sales of immovable property shall take place without the sanction of the Commissioner."

A brief mention could be made of the other important matters of the time as gathered by a study of the Old English Correspondence Volumes of the nineteenth century maintained in the Record Room of Hazaribagh Collectorate. (16) The practice of 'Churruck' appears to have been prevalent in the Hazaribagh district. People used to take the vow that if they would obtain some desired object they would swing 'Churruck' for a certain number of years. Hazaribagh sent quantities of iron ore and mica to the French Exhibition in 1855. For a rupee 1,000 *pooles* of straw and 400 bamboos could be obtained. Carpenters and masons were paid 2 annas per day as wages. *Gharamis* or ordinary labourers were available for 1 anna and 11 pies per day. At Sitagarha near Hazaribagh one Mr. Liebert, a German, was growing coffee in 1857. One Mr. Wheeler, a pensioner from the Artillery, who had settled at Hazaribagh also cultivated coffee in the district. Both Mr. Liebert and Mr. Wheeler suffered a lot in the hands of the mutineers in 1857 by the burning of their properties. The mutineers did not spare the German Mission at Singhani.

The Simpson tank and Rattray House in Hazaribagh town have remained as reminiscences of the insurrections. The old Rattray House is the present Law Cottage on Barhi-Hazaribagh Road near the Hazaribagh Courts. The old Simpson tank is just opposite to it. There is a graveyard in Chatra where are buried the Europeans who were killed in the encounter between the mutineers and the troops led by Major English. There are also graves of some of the soldiers by the Grand Trunk Road at various places. Simpson had acquired a house in Hazaribagh town which still exists.

After the Movement of 1857-59 the district remained on the whole quiet. In 1861 the police powers of the zamindars were abolished and by 1861 the established thanas were at Hazaribagh, Itkhor, Pagar, Ramgarh, Kasmar, Gumia, Hunterganj, Barhi, Bagodar, Sirampur, Kharagdiha, Gawan and Kodarma. Municipalities were established at Hazaribagh and Chatra on 1st April, 1869. Next year, the Giridih subdivision was formed with Karharbari as its headquarters. In 1871

it was removed to Pachamda and finally in 1881 to Giridih. The first railway lines in the district were built in 1871 from Madhupur on the Chord Line to Giridih, for the convenience of the Railway's colliery there.

Sir George Campbell, the Lieutenant Governor of Bengal (1871-1874) had a fascination for Hazaribagh. The present circuit house was built for his use and the road from Bagodar to Hazaribagh was made for his tours. It was during his time in 1874 that the Viceroy, Lord Northbrook, came to Hazaribagh and then to Ranchi. The journey was accomplished from Giridih partly on horseback, partly by *palki* and partly in carriages.

On December 12, 1912, Bihar, Orissa and Chotanagpur were separated from Bengal by a Royal Proclamation to form a separate province under a Lieutenant Governor-in-Council. In November, 1914, the Chatra subdivision consisting of the thanas Simaria, Chatra, Huntergunj and Chauparan, was formed with Chatra as its headquarters. Orissa was separated as a province in 1938. All through Hazaribagh district has formed a part of Chotanagpur Division, Bihar.

With the end of the first World War (1914-18) began the present phase of political life in the district. It appears that there was not much of political life in the district before 1920. There was some unrest among students who had organised the Bihari Students' Association with its centre of activities at Patna. The Non-Co-operation Movement started by Gandhiji in 1920 profoundly affected this district too. A number of students gave up their studies and threw themselves in the movement. A few lawyers suspended their practice to join the movement. The District Congress Committee was formed.

The movement went on with greater momentum in 1921. Shri Rajendra Prasad, now President of the Indian Republic, visited this district and addressed meetings at Chatra and Hazaribagh. There was a riot at Giridih which was suppressed immediately by the police. There was also an attempt to boycott local schools. National schools were set up at Chatra, Hazaribagh, and Dhanwar. These new schools, however, collapsed due to financial strain.

After the tragedy of Chauri Chaura, early in 1922, there occurred a split in the All-India Congress Organisation and a party known as the Swaraj Party was formed under Shri C. R. Das and Shri Motilal Nehru to contest elections. It had its repercussion on this district as well. In 1923, there was the election for the Provincial Legislative Council and Shri Krishna Ballav Sahay, the Swaraj Party candidate, was elected from this district, by an overwhelming majority.

The Congress came to be the only effective political party in the district. It captured the District Board. In 1925, Mahatma Gandhi visited Hazaribagh for the first time. His visit followed by the visits of other leaders gave a great support to the Congress movement.

In 1930 the Civil Disobedience Movement gained a new momentum in the district. The Government took stern measures against it. Meetings and processions were forcibly dispersed. Congress leaders were bound down under section 108, Indian Penal Code for one year. A number of leading Congressmen were convicted.

The movement was joined by the Santals under Shri Bangam Manjhi of village Boroberra, police-station Gomiyan. He claimed to have some supernatural power and he became a sort of religio-political leader of the Santals of police-stations Mandu, Ramgarh, Bagodar and Gomia. The Government apprehended in this movement the seeds of another Santal rising and made a number of arrests with the result that the movement declined. Most of the Congress leaders of Bihar were lodged in 1930 in the Hazaribagh Central Jail. Mahatma Gandhi came to Hazaribagh again in 1932 in connexion with the Harijan Movement and visited certain rural areas of the district.

According to the Government of India Act, 1935, the Chotanagpur Division and the district of Santal Parganas were declared a "Partially Excluded Area". In the election to the Central and Provincial Legislatures in 1937 in the district the Congress Party swept the polls. One of its representatives, Shri Krishna Ballav Sahay, was appointed Parliamentary Secretary to the new Government of Bihar. There was an election of the District Board also in 1938. It resulted in the victory of the Congress Party and for the first time in 1939 a non-official Chairman was elected.

In March, 1940, the Indian National Congress held its 53rd session at Ramgarh under the presidentship of Maulana Abul Kalam Azad. Side by side with the Congress Session, was the Anti-Compromise Conference with Shri Subash Chandra Bose as President. There was a heavy rain and the session had to be cut short. Ramgarh saw the rise of the All-India Forward Block with Shri Subash Chandra Bose as President and the Radical Democratic Party under Shri M. N. Roy.

Individual Satyagraha was organised in this district also. Then came the 1942 Movement. Kodarma railway station was set on fire and firing had to be taken recourse to. This resulted in one death and several injuries. An attempt was made to burn the local District Record

Room. In Hazaribagh and other parts of the district students took part in organising processions and in tampering with telephone and telegraph connections. This resulted in several arrests and imprisonments. One of the most significant events of the year was the escape of Shri Jai Prakash Narayan and seven others from the Hazaribagh Central Jail where most of the important Congress leaders of Bihar were lodged, on the Diwali night. All efforts for their detection failed.

In the post-war election to the Provincial Legislature the Congress Party won all the seats in the district and Shri Krishna Ballav Sahay, an elected member, was included in the Bihar Cabinet as a Minister of Revenue and Forest. Soon after, the Bihar Private Protected Forest Act of 1946 was enacted and extended to this district. This was followed by an agitation sponsored by the Raja of Ramgarh and some other landlords of the district. This agitation had led to the formation of a political party known as the Kisan Forward Block with Shri Kamakshya Narayan Singh, the Raja of Ramgarh (Padma) as the leader. It opposed the Congress Party in the District Board election of 1947. The party is now known as the Janata Party.

In the latter part of 1946 and in the early part of 1947, several agrarian troubles took place in the Santal areas of the district. The Santal Manjhis claimed that they were the first settlers of the land and that the local zamindars and mahajans by dishonest means had appropriated their lands. Several paddy cutting cases took place in villages Tulbul, Siari, Hardiamo and Jala. Quick administrative measures had brought the situation under control.

The transference of power under the Indian Independence Act of August 15, 1947, and the enforcement of the New Constitution on January 26, 1950, have changed the character of the administration of the district. The district of Hazaribagh is no longer included within the Scheduled Area.

One of the events which has created a certain amount of excitement in the district was the abolition of zamindaries after the passing of the Zamindari Abolition Act of 1947. Government have taken over the principal zamindaries and an elaborate machinery has been set up for this purpose. A very large number of ameliorative measures have been taken up for the prosperity of the common man.

The election to the Central and State Legislatures according to the new Constitution was held in the district in January, 1952. There was a keen contest between the Congress party led by Sri Krishna Ballav Sahay and the Janata Party led by Sri Kamakshya Narayan Singh,

While the Congress won all the seats in the Giridih subdivision, the Janata Party had a more successful contest in the Sadar and Chatra subdivisions.

The Damodar Valley Corporation in the recent years with its multi-purpose projects has greatly changed the district. Dams have been constructed at Tilaiya, Konar and Charwa. They are to supply electricity and water for drinking and irrigation and facilitate fish-rearing. There has been erected a huge Thermal Power Station at Bokaro to generate and supply electricity. The Charwa Dam is supplying drinking water to the Hazaribagh town. The Damodar Valley Corporation have tried to rehabilitate the people of the district who have been displaced by the submerging of their villages and lands.

ARCHAEOLOGICAL REMAINS.

The earliest human settlement in the Hazaribagh district as indicated by a palaeolith tool which was found by Hughes in the Bokaro Coal-field (V. Ball, *Stone Implements Found in Bengal, Proceedings of the Asiatic Society of Bengal*, 1865, pp. 127-28) is a boucher made of micaceous quartzite, now kept in the Indian Museum, Calcutta. The scarcity of neolithic implements within the confines of the district while many of these have been noticed in the adjoining regions may perhaps be attributed to the lack of adequate exploration.

The Chalcolithic phase is represented by copper artefacts discovered from two sites. At Bargunda was found a flat copper celt as well as a copper armlet (Robert Bruce Foote, *The Foote Collection of Indian Pre-historic and Proto-historic Antiquities*, 1914, page 248). They are now lodged in the Madras Government Museum. Pachamba (Giridih), a subdivision of the district, has yielded three flat copper celts, now in the Indian Museum (J. Goggin Brown, *Catalogue of Pre-historic Antiquities in the Indian Museum*, pages 140 ff.) The date of the copper artefacts is difficult to determine since they were not found in association with any dateable object. So far as typology is concerned it is well to remember that some of them closely resemble the copper-plate grants of the historical period (*Indian Antiquary*, Vol. 1, page 355, also plate XIV).

There is not a single protected monument in the whole of the Hazaribagh district. This may be ascribed partly to the fact that it was never the seat of a powerful empire and possibly, not many buildings big and strong enough to survive through ages, had ever been built here. But at the same time it may be mentioned that no systematic exploration has yet been made to assess the character of the existing ruins in the district.

Large dolmens or flat stone slabs planted upright abound in the district; the exact significance of these is still unknown. There are also other ruins, in the form of dilapidated brick structures, which await exploration. One of such sites, the temple ruins near Itkhor, may belong to the mediaeval period.

The remains on Kulua and Parasnath Hills are of recent date and do not come under the purview of archæology. According to tradition, the former was the birth-place of the tenth Jain Tirthankar Sitla Swamin and the latter is associated with the life and activities of Parasvanath. Twenty out of the twenty-four Tirthankars of the Jains had attained their *nirvana* at Parasnath Hill.



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CHAPTER V.

THE PEOPLE

AREA OF THE DISTRICT.

The present area of Hazaribagh district is 7,016 square miles. The population of the district in 1862 was reported by Captain Thomson, Revenue Surveyor as 7,16,065. The first census of the district was taken in 1872. There have been subsequent decennial censuses. The population in the different census years was reported as follows :—

Year.	Population.	Increase or decrease in the population.	Percentage Increase or Decrease
1881	11,04,742	..	..
1891	11,64,321	+ 59,579	+5.4
1901	11,77,961	+ 13,640	+1.17
1911	12,88,609	+1,10,648	+9.39
1921	12,76,946	— 11,663	—0.91
1931	15,17,357	+2,40,411	+18.83
1941	17,51,339	+2,33,982	+15.42
1951	19,37,210	+1,85,871	+10.6

Thus between 1881 and 1951, i.e., in 70 years the population of the district has recorded a net increase of 8,32,468 persons.

The methods of enumeration at the earlier stages were rather experimental and not very reliable. Even now it cannot be said that the methods of enumeration are infallible and the results absolutely reliable. Nevertheless, they give some data which could also be tested from other economic trends.

The incidence of growth or otherwise of the population of the district of Hazaribagh as shown by the figures quoted above is in conformity with the economic trends of the district. There was an enormous development in the coal mines of Giridih subdivision. This explains the increase in population between 1881 and 1891 chiefly in that subdivision. In the next decade there was a severe economic scarcity almost amounting to famine, which caused a great increase of emigration and a high death rate. The decrease in population was shared by Hazaribagh, Chatra, Barkagaon, Gumia,

Barhi and Bagodar police-stations. The rate of increase during 1901—1911 was high. Giridih subdivision gained 50 per cent increase in population owing to the development of the Giridih coal-fields and the growth of the new town which is the present subdivisional headquarters. The other thanas that gained a remarkable increase in population were Peterbar (49 per cent), Dumri (38 per cent), Gumia and Mandu (34 per cent each) and Ramgarh (31 per cent). It is significant that the comparative ease in the economic situation had cut down emigration during this decade. These thanas are all in the Damodar Valley and south-east in the district and have a very considerable aboriginal element. Apparently, the comparative absence of emigration had contributed to the great increase of population in these areas. The other thanas that gained in population in this decade were Bagodar (22 per cent), Gawan (20 per cent), Kodarma (19 per cent) and Huntergunj (19 per cent). The increase in Bagodar area could be associated with the opening of the Grand Chord Railway. The area of Kodarma had a great development of the mica mines and naturally this led to an increase in the population. It may also be mentioned that the landlords had always tried to keep landless serfs tied to them and not to allow them to leave the district.

Another remarkable trend of the population will be seen in an analysis of the elements in the population of the district that had been born outside it. In the Census of 1911 there were 41,631 persons residing in the district who had been born outside it. Out of this population as many as 34,000 had come from contiguous districts, 3,000 from other parts of the province and 4,000 from other provinces. The percentage of immigrants from Gaya has always been large. The peons, *barahils* and other employees of landlords and a fair element among the settlers in the district have been drawn from the neighbouring district of Gaya.

In the Census of 1911 it was found that 1,44,541 inhabitants of Hazaribagh district were residing outside it. Regarding the number of men of the Hazaribagh district residing outside it Sir J. D. Sifton in the *Final Report on the Survey and Settlement Operations in the district of Hazaribagh* (1908—1916) observed as follows :—

“ Of this total 32,000 have gone to the adjoining districts of Gaya, Monghyr, Santhal Parganas, Ranchi, Palamau and Manbhum, probably for agriculture : 3,300 are working in the coal mines of Jharia and Burdwan : 1,500 are in tea gardens of Jalpaiguri and Chittagong. Besides this, there is considerable emigration to Assam

and the mills around Calcutta, and there is a large recruitment of Khalasis from Hazaribagh for Survey operations in Eastern Bengal and Burma, and for the Burma Forest Department. "

In the Census of 1921 the population of the district had decreased by 11,663 or 0.91 per cent. The decrease in the population in the Census year of 1921 appears also to have been largely due to the terrible cholera epidemic which broke out in 1917 and which was followed by an equally severe influenza epidemic. There was also a general distress that resulted from the failure of rains. It has been said that before the end of 1918, as many as 82,000 men had perished of whom 68,000 died of fever only.

The distribution of population has been very uneven. In 1911 the population of the Giridih subdivision was 4,52,656 with a density of 226 per square mile, it was 6,12,544 for Sadar subdivision with a density of 181 per square mile. In Chatra subdivision the population was 2,33,409 with a density of only 145 per square mile. " It is a noteworthy fact that Chatra, the portion of the district which contained the gate of the 'Jharkhand' or the jungle states of Chotanagpur, and, as the highway between Bihar and Lohardaga, was the tract first penetrated and occupied by Biharis, is now by far the most sparsely populated part of the district." [*Final Report on the Survey and Settlement Operations in the district of Hazaribagh* (1908—1916) by Sir J. D. Sifton, page 12.]

During the decade 1921—1931 an increase of 2,40,411 over the population figure of 1921 was recorded as disclosed in the Census Report of 1931. The percentage increase was 18.83. The rate of natural increase was 16.66 per cent—a rate more rapid than in any other district of the province excepting Angul (Bihar and Orissa then constituted a single province). The growth of population was most pronounced in the south and south-east of the district. These are colliery areas, and here the natural increase was supplemented by a great influx of labour from outside. The growth of Chatra subdivision in the extreme north-west of the district was not on anything like the same scale as the growth elsewhere. Chauparan was the only thana in this subdivision which held its own with the rest of the district due to climatic and other privileges which it enjoys like that of Sadar and Giridih subdivisions. The rest of Chatra subdivision is not so well equipped for the support of a rapidly increasing population. However, Huntergunj was the only thana which showed a decrease in population unlike other thanas of the Chotanagpur division none of which recorded an increase of less

than 5 per cent during the decade. In the Census of 1921 this thana actually added to the population of the district when there was a general fall of 0.91 per cent in the population of the district. In the Census of 1901 and 1911 it recorded a greater increase than any other part of the district. Therefore, the decrease is not easily accountable.

In the Census of 1941 an increase of 2,33,982 persons was recorded over the population figure of 1931 but the percentage increase was 15.42 only. Percentage increase was highest in the Sadar subdivision and lowest in Chatra subdivision, the percentages being 16.57 and 10.24 respectively. In Giridih subdivision the rate of increase was recorded at 16.14 per cent. It may be pointed out here that Chatra was the only subdivision in this district, which in this decade showed a greater rate of percentage increase than in the previous decade, although Chatra thana in this subdivision recorded a decrease of 25.75 per cent. This was the only thana in the whole of Chotanagpur division, which recorded such an alarming percentage decrease in population. However, it is to be noted that Huntergunj thana of this subdivision recorded an increase of 8.63 per cent as against a decrease of 0.18 per cent in the previous Census. It may also be pointed out here that Sadar and Giridih subdivisions actually recorded a decline in the rate of percentage increase as compared to the immediately preceding decade.

In the Census of 1951 also an increase of 1,85,871 (10.6 per cent) persons was recorded. As compared to the previous census figures, the percentage rate of increase recorded in this decade was less by 5.36. Decrease in the percentage rate was more pronounced in Giridih and Chatra subdivisions. Chatra actually showed a net decrease of 0.3 per cent. However, Chatra thana in this subdivision showed a percentage increase of 0.6 as against a percentage decrease of 25.75 recorded in the previous decade. Percentage increase in Sadar and Giridih subdivisions was recorded at 16.1 and 8.0 respectively as against 16.6 and 16.4 respectively recorded in the Census of 1941.

It would appear from the foregoing analysis that in course of time, while the population of the Sadar and Giridih subdivisions rapidly increased, that of the Chatra subdivision did not show any marked change. It appears useful to give subdivision-wise population and density here. In 1941 the population of the first two subdivisions was 8,39,551 and 6,48,447 with a density of 247 and 317 per square mile respectively. The population of the Chatra subdivision was only 2,63,241, density being 171 per square mile. In the Census of 1951 the population of the Sadar subdivision was 9,74,494

and the density was 286 per square mile. The population of the Giridih subdivision was 7,00,202 with a density of 342 per square mile. The Chatra subdivision, on the other hand, as stated above, had a decline of 0.3 per cent, the population and density being 2,62,514 and 170 respectively.

The people are organised according to the Census of 1951, in a total of 3,24,012 occupied houses, out of which 2,98,789 are in rural areas and 25,223 in urban areas. The rural areas are comprised in 6,129 villages and the urban areas in 8 towns. The towns with their population as recorded in 1951 Census Tables are given below :—

Hazaribagh—33,813.

Giridih—29,167.

Kargali—17,644.

Ramgarh Cantonment—14,775.

Chatra—9,911.

Bokaro—9,807.

Jhumri Tilaiya—9,090.

Bermo—8,920.

Among these Hazaribagh, Giridih, Kargali and Chatra have Municipalities and Jhumri Tilaiya a Notified Area Committee. The Ramgarh Cantonment has a Cantonment Board.

POPULATION ACCORDING TO CASTES.

The majority of the population in Hazaribagh are Hindus. Some of them, like the Bhuiyas and the Kharwars are aboriginal or semi-aboriginal in origin. The Hindus formed 83.96 per cent of the population in 1872. The percentage had been fairly maintained till 1911 when they numbered 10,66,067 or 82.7 per cent of the whole population. According to the Census of 1951, their number is 17,07,558 or 88.9 per cent of the total population of 19,37,210.

The castes of Brahmins, Bhumihaar Brahmins, Rajputs and Kayasthas are well represented. The most numerous functional castes are, however, Gowalas, Telis, Koiris, Chamars, Kahars, Hajjams, Burhees, Dusadhs, Kumhars, Turis, Suris, Sokiars and others. It should be mentioned here that enumeration by castes was adopted in the previous censuses but this basis of enumeration has been completely given up in the 1951 Census. However, for purposes of record some mention will be made of the population of some of these castes.

The Brahmins were 25,422 in 1881, 31,013 in 1891, 35,558 in 1911 and 36,804 in 1931. The Brahmins have taken largely to secular pursuits. The number of Rajputs was 37,404 in 1881, 34,183 in 1891, 29,100 in 1911 and 35,760 in 1931. The Rajputs are mostly either landholders or cultivators. Regarding Kayasthas Hunter in his "*Statistical Account of Bengal*" (page 76) had given their number in the district as 6,300. The number of Kayasthas was recorded as 10,595 in 1921 and 12,075 in 1931 Censuses. The Kayasthas are mostly in services of some kind.

The Gowalas are mostly found in the northern half of the district. Most of them are taken to have come to Hazaribagh from the neighbouring district of Gaya. A large number of them have given up pastoral pursuits and are now only cultivators. The Koiris who are essentially an agricultural and horticultural class numbered 41,495 in 1881, 44,700 in 1891, 52,817 in 1911 and 63,632 in 1931.

Telis, who are engaged as oil pressers and also as cultivators, numbered 42,319 in 1881, 44,372 in 1891, 33,347 in 1911 and 65,835 in 1931.

The Chamars and the Kahars, Hajjams, Burhees and Kumhars, who are the other common functional castes, are well distributed throughout the district and practically every village has got some of them. Their figures are as follows:—

	1881.	1891	1911.	1931.
Chamars	... 40,981	39,266	49,503	65,675
Kahars	... 36,849	31,977	31,747	31,501
Hajjams	... 23,659	25,635	27,533	33,141
Burhees	... 25,070	26,692	29,958	34,452
Kumhars	... 21,966	21,322	26,211,	33,826
Dusadhs	... 26,729	25,252	26,958	28,784
Turis	... 17,729	20,778	...	30,634
Suris	... 17,576	16,682	...	...
Sokiers	... ..	13,491	13,982	...

There are other functional castes well distributed all over the district like Dhobis (washermen), Lohars (ironsmiths), Mallahas (fishermen) and Sonars (goldsmiths), etc.

There are a number of aboriginal and quasi-aboriginal tribes in Hazaribagh district. They are Bedias, Bhogtas, Bhuiyas, Ghatwals,

Mundas, Oraons, Rajwars, Birhors, Santhals and Kurmees. Authorities like Messrs. J. D. Sifton and S. C. Roy have referred to these tribes as such in their *Final Report on the Survey and Settlement Operations in the district of Hazaribagh* (1908—1915) and Roy's works respectively. These tribes have been found in the district of Hazaribagh from remote times although their origin or immigration is shrouded in legend and mystery. There is, however, no doubt that in the remote past some of these tribes were masters of certain portions of the district.

Some of the important tribals will be noticed at some length later owing to their importance as original residents in the district. They are Mundas, Birhors, Oraons, Santhals and Bhuiyas. The other tribes which are not so important numerically are Bedias, Bhogtas, Ghatwals, Kurmees, Kurmalis and Rajwars. A brief note on these tribes is given first.

Bedias.—The population of Bedias in 1891 was 10,886, in 1911 the population reached 12,668, while in 1941 their population was recorded as 18,063. The Bedias are practically confined to Ramgarh Thana and they are now essentially cultivators as distinct from professional snake charmers like their ancestors. According to the Santhal tradition they are the descendants of those Santhals who were feeble-minded and fled from the social outrages threatened by Madho Singh. Hunter treats them as pure Mundas. Their physical features and social customs with the Pahan and similarity of the names of their *killis* (exogamous sub-division) make them more akin to the Mundas.

Bhogtas.—Bhogtas numbered 37,519 in 1891, 36,984 in 1911, 31,703 in 1931 and 39,466 in 1941. They are confined mainly to the Sadar and Chatra subdivisions. The Bhogtas are mostly herdsmen and cultivators. They are now semi-Hinduised and are counted to be members of the Scheduled Castes.

Ghatwals.—It is generally believed that Ghatwals were originally Ghatwars of the Bhuiya tribe who used to guard the mountain passes. Now most of the Ghatwals claim to be Rajputs and Hindu by religion.

Kurmees.—In 1881, the number of Kurmees was 62,144, in 1891, 71,065, in 1911, 84,589 and in 1931, the number was 1,05,725. The Kurmees along with Koiris are the best agriculturists of the district.

Kurmalis.—The Kurmalis were 8,000 in 1911, 6,939 in 1931 and 9,836 in 1941. They are found mostly in Ramgarh, Golah and Peterbar thanas of the Sadar subdivision. Previously they were iron-smelters (blacksmiths) but now they have become agricultural labourer.

Rajwars.—The Rajwars are mostly confined to a narrow strip of the district bordering on Gaya and are now counted as a Scheduled Caste. In 1881 their number was 9,291, in 1891, 9,160 and in 1931 their number was counted as 9,480.

Mohamadans.—The population of Mohamadans has been as follows :—

1911—1,33,328.

1921—1,36,001.

1931—1,71,694.

1941—2,09,384.

1951—2,14,961.

They are found mostly in the Giridih and Sadar subdivisions. The numerically important sections among the Mohamadans are Ansaris, Sheikhs, Kalals and Pathans.

Ansaris are spread all over the district but the majority of them live in the Giridih subdivision. The Mohamadans are mostly cultivators and weavers. There are some Muslim landlords in Sadar subdivision and some Pathan tenure-holders in Huntergunj and Kodarma thanas.

Christians.—There are several Missions working in Hazaribagh district, namely, the Gossner Evangelical Lutheran Church, the Roman Catholic Mission, the Dublin University Mission and the United Free Church of Scotland Mission. They are working mostly among the aboriginal and backward classes. They are responsible for a number of medical and educational centres which will be noticed at their proper places. It is remarkable that in spite of the work of the Missions for over a century the number of Christians in the district is extremely small and very much in contrast to the neighbouring district of Ranchi where apparently the Missions have had more success in converting the inhabitants of the district. The number of Christians in Hazaribagh district in 1911 was 1,786 and after 40 years this number has risen to 6,928 only.

Other Religions.—According to the Census of 1951, there were 4,176 Sikhs, 1,689 Jains and 227 Buddhists in Hazaribagh district. Most of the Sikhs are new-comers as a result of the creation of Pakistan. The Sikhs have various types of professions and are not confined to any particular kind of occupation. There are now Sikh drivers, hotel keepers, timber-traders, carpenters, shop-keepers, mechanics, etc. They are now an organised community and have their own *gurudwara*.

They have taken to higher education. The Jains are the Marwaris, who, though a very small community, control various business in the district. There are occasional influx of Jains as pilgrims to the famous Parasnath temple and the other Jain shrines in this district. Buddhism has practically died out in the district.

LANGUAGE.

The opening of the Damodar Valley Project has drawn a considerable number of people from various parts of India and particularly from Southern India. This is responsible for a variety of languages and dialects being spoken. The principal languages which are spoken by a large population according to 1951 Census are given below :—

Hindi—16,90,422.

Santhali—1,93,460.

Bengali—27,352.

Oraon—5,240.

Mundari—4,981.

THE TRIBALS.

The tribals of the district offer a fascinating study and form an important part of the population.

Mundas.—Mr. B. C. Mazumdar, in an article published in the *Modern Review of Calcutta* in 1907, expressed the opinion that the Bhuiyas and the Chutias were the earliest inhabitants of Chotanagpur and that they were pushed towards the east and south by the Mundas. This view does not, however, find much support. Other writers and documents on the subject such as Col. Dalton, Col. Tickel, Hunter, Risley, Ball, Bell, S. C. Roy, Bradley Birt, Reid, the *Settlement Report of the Ranchi District*, the *Imperial Gazetteer of India* and the *District Gazetteer of Ranchi* (1917) are of the opinion that the Mundas were the earliest inhabitants of Chotanagpur, and none of them has a word to say about the Bhuiyas or the Chutias as prior to the Mundas. "The traditions of all the tribes and castes, including the Bhuiyas, of the Ranchi district or the central plateau of Chotanagpur agree in attributing to the present tribe of Mundas the foundation of its earliest villages after the extermination or absorption of the pre-historic Asuras." (*Chotanagpur Chutias and Bhuiyas*, by S. C. Roy in *Journal of Bihar and Orissa Research Society*, Vol. 18, page 68.)

According to the tradition of the Mundas, they came from the north. Being pushed eastward by the advancing tide of the Aryan conquest, they reached Ajabgarh (present district of Azimgarh in Uttar Pradesh)

and dwelt there unmolested for a long time. Azimgarh forms the starting point of their historical traditions. From there, so runs the Munda tradition, the Mundas migrated and settled successively in Kalanjargarh, Garh Chitr, Garh Nagawar, Garh Daharwar, Garh Pali, Garh Piprah, Mandar Pahar, Bijnagarh, Hardinagar, Lakhnauragarh, Nandangarh, Rijgarh, and Ruidasgarh, until they reached Omedanda, a village not far from the meeting point of the Ranchi, Hazaribagh and Palamau districts, where they founded their first settlement in Chotanagpur, and separated from the Santhals who crossed the Damodar river and passed on to Manbhum and the Santhal Parganas. Mr. S. C. Roy, the author of "*The Mundas and their Country*" has accepted this tradition of the Mundas and tried to identify these traditional places.

As mentioned before the route by which the Mundas entered the district of Ranchi was along the border of Hazaribagh and Palamau. They were, it seems, sojourners in this area, and only a small number remained and made permanent settlements in this district. Traces of Mundari settlements are not uncommon over the west and south of the district. The numerous tribal village names such as Erabonga, Lowalong and Kasilong and the monolithic grave and memorial stones which are found in that area are reminiscent of the Mundari settlements there. In this district there is no *parha* or *patti* organisation. It is, however, gathered that not long ago there was a *manki-patti* round about Iaranga to the south of Tandwa. Here there are some conspicuous *bid-diris* or erect memorial stones; and to the west there is a *tola* which is still called Mankidih. The *Settlement Report* (1908—1915) recorded the existence of a Mundari *khunt-katti* family at Korambe in thana Ramgarh. West of Giridih is a village Mahesmunda. In *pattas* given by the Zamindar of Mahesmunda the word *johar*, the Mundari term of salutation, is used.

The number of Mundas in this district was 13,654 in 1891, 15,022 in 1901, 16,568 in 1911, 17,056 in 1921, 18,695 in 1931 and 26,121 in 1941. They are found mostly in the Sadar and Giridih subdivisions, while they are negligible in the Chatra subdivision. In 1941 in the Ramgarh thana alone there were 9,915 Mundas. The number of the Mundas has increased due to the arrival in recent times of their fellowmen from Ranchi for employment or settlement but the vast majority of them are the descendants of those who had made early settlements. They have maintained very little contact with the Mundas at Ranchi and thus, under the predominant influence of the Hindus around them, they have lost most of the Munda culture, customs and practices. Many have lost their language and religion. They are as a class poor and illiterate.

The Mundas were the original reclaimers of the soil over the area in which they settled. Each family made in the virgin forests its clearances and established *khunt-katti hatas* or the villages of the family of the original settlers. The descendants in the male line of the original settlers are known as *khunt-kattidars*. The headman of each village was a Munda who exercised civil functions. The *pahanr* or *pahan* or priest was the religious head. Several villages of one *killi* or clan formed an association for common social and administrative matters. It was known as a *patti* or *parha* with a Manki or Raja as its head. The Mundas were originally republicans but later on, kingship was instituted and they were gradually reduced to servitude. Their *khunt-katti* rights, largely due to their own ignorance and folly, were destroyed everywhere except in 156 villages (153.7 square miles) in the Ranchi district. Only a few fragments of the old *khunt-katti* lands of the original cleaners of the soil have been left to their descendants as privilege tenures, and these are called their *bhuihari* lands.

The Mundas call themselves *horo-ko* (men) and their race *horo* (man). The name Kol is often wrongly applied to them but this they strongly resent. They are divided into a number of separate clans or septs, called *killis*. They are totemistic, their names being taken from some animals or plants. They are exogamous. It is considered one of the greatest crimes for a Munda to take as wife a woman belonging to his own *killi*. Should any one be found guilty of that crime, a panchayat of the elders of that *killi* will order the offenders to separate. If they refuse, they are excommunicated and expelled from the village. Descent is counted through father, and the children belong to the paternal *killi*.

The main occupation of the Mundas is agriculture. Their dress is simple and scanty. Many of them are now abandoning the ancient dress. Men usually wear a loin cloth called *botoi*. They use a wrapper known as *pechchouri* or *barki* to cover the upper part of the body. Women wear a cloth called *panri*. Clothes are made of cotton. Young men and women are fond of jewellery, which is generally made of iron or brass. Leaves, flowers and barks are also used as ornaments. The staple food is boiled rice and *dal*. Meat is used during feasts and festivals. Their favourite drink is *ili* or rice-beer. It is prepared at home. They invariably carry bows and arrows or *lathis* when they visit markets or go out on long journeys. These weapons are a part of their daily life.

In a village there are separate dormitories (*giti ora* or sleeping houses) for young men and girls. When they meet after their evening

meals, riddles are recited and solved, folk-tales, traditions and fables are told and memorized, and songs are sung and learnt until bed time.

The Mundas are great lovers of music and dancing. Each village has an *akhra* or dancing ground generally in the middle and underneath a tree. Poverty is no hindrance to their participation in dances. They even participate in the festivals of others. Their main religious festivals are *mage*, *phagu*, *ba*, *kadleta*, *karam*, *ind* and *sohorai* in different seasons of the year. In winter they have *jatras* or dance-fairs. Songs and dances are a part of their life.

The Munda women have a high position in the society. They do not inherit but they are not disregarded. They manage the household work at home and assist men in their work on the fields.

Formerly, the Mundas cremated their dead, and collected the bones which were ceremoniously interred in the family *sasan* on the annual *jang-topa* (bone-burying) day. Under the influence of Christianity cremation has now been replaced by burial, except when a person is killed or partly devoured by a tiger. The dead are buried in a *masnra* or graveyard, and bones are finally taken out, put into an earthen vessel, and ceremoniously deposited under the family burial stone at the village *sasan*, on the next *jang-topa* day. The *sasan* consists of a number of big stone slabs or *sasan-diris*, under which lie buried the bones of the deceased members of each family *khunt-kattidars* or Bhuihars of the village. No outsider, not even resident Mundas of the village, who do not belong to the original village family, is allowed to use the village *sasan*. The Mundas very properly regard these sepulchral stones or *sasan-dirs* as the title deeds or record-of-rights in land, for any man who claims a share in the ancestral lands of the village must show that the stones of his ancestors were buried there.

The supreme God of the Mundas is *Sing-Bonga*. He is the creator and his abode is in heaven. The second class of gods are *Hatu-Bongako* or the village gods who are believed to aid them in their agricultural operations and hunting excursions and guide them in every concern of life. They are worshipped at stated times by the *pahan* in the *sarna* or sacred grove. The third class of gods are the *Ora-Bongako* or household gods, who are believed to be the spirits of the deceased ancestors. The head of the family worships them in the *adin* or sacred tabernacle of his house. The last two classes of *Bongas* are the *Manita Bongas* or gods to be worshipped. There are also *Banita Bongas* or gods who require to be appeased or propitiated. They are in fact no gods. They are believed to be the earth-bound spirits of persons who died a violent or unnatural death. Their

propitiation is the duty of the ghost-finders, the *matís* or *deonras*, who may also be non-Mundas by race. The Mundas have no temples or images. The *sarnas* or sacred groves, the remnants of the ancient forest, within village boundaries, often near a stream, are the only temples known to them. There the village gods reside and are periodically worshipped with sacrifices. The *sal* tree (*Shorea robusta*) cluster has a sacred appeal to them.

Those Mundas who have become Hindus or Christians no longer follow *sarna dharam* and many of the old customs. In the closing years of the last century, Birsa Munda of Chalkad in Ranchi district tried to establish a new religion which had traits of both Hinduism and Christianity. The central theme of this *birsa dharam* is that there is only one God, that Birsa is his incarnation on earth, and that purity of character and habits are the essential things demanded of man by God. The number of the Mundas following this faith is small.

The Mundas believe in evil spirits and witchcraft. The former bring diseases or hardships. They are propitiated with sacrifices and offerings. To detect a witch, the *sokha*, *mati* or *bhagat* is approached. Prior to the establishment of the British Government, the persons accused of witchcraft were cruelly treated or beaten to death. This practice has almost died out now.

The chief officers of a Munda village are the *mahato*, the *pahan* and the *munda*. The *mahato* has taken the first place. The ancient *parhas* are still in existence. The head of the *parha* in the *khunt-katti* area is still called *manki*. In the *Bhuinhari* area, he is called *raja* and is assisted by the *dewan*, the *kuar*, the *lal*, the *thakur*, the *kotwar* and other officers. The titles have been adopted from the Hindus. Each *parha* has a separate flag. Attempts are being made to strengthen the organisation.

Birhors.—The number of Birhors in this district was 1,024 in 1911, 1,143 in 1931 and 1,623 in 1941. They are found mostly in the Sadar subdivision.

The Birhors or forest men are closely allied to the Mundas who often call them as Bir Mundas or forest Mundas. Their language is but a Mundari dialect, showing a strong Santhali influence. Their origin and advent in this district are not known. It is often said that Madho Singh, who drove out the Mundas and Santhals from Ruidasgarh, was a Birhor.

They still lead a very primitive life. They are divided into two groups, i.e., *uthlu* (migratory) and *jaghís* (settled). The *uthlu* Birhors are quite nomadic and live in groups of three to ten families camping

in the jungles, remaining only for a week or two on the same spot except during the rains, and moving from jungle to jungle, on a regular round, completed in about two years. They return to the original place and start once more on a similar move along the same route. The *jaghi* Birhors, on the other hand, are those families that, tired of toilsome wanderings, have settled down on some hill top or the outskirts of a jungle. Some of them produce maize or beans during the rainy season. Majority of them are landless. Slightest ill-treatment by the landlord or neighbours makes them migrate to some more suitable place, or fall back to their old *uthlu* life.

The settlement of the *jaghis* as well as the temporary encampments of the *uthlus* are both known as *tandas*. A *tanda* consists of about half a dozen or more huts. The *uthlu* huts have no walls; they are made of branches covered with leaves. Those of the *jaghis* are like wise leaf-covered, but are larger and have walls. The Birhors have scanty clothings. They live on deer, hares, monkeys, rats and other trapped animals, on edible roots and potherbs found in the jungles and on rice procured by the sale or barter of honey or of twine and carrying nets made with the fibre of *Bauhinia scandens*. They are very skilful in hunting, discovering wild honey and making ropes.

In each *tanda* or camp there is a *naya*, temporal and spiritual head, supposed to be supernaturally elected, but practically hereditary. He appoints his helper, the *kotwar*. There are one or more soothsayers called *mati*.

The Birhors, like the Mundas, are divided into exogamous clans mostly named after some animal or fruit. The dead are buried or cremated. They worship (a) the *Sing Bonga*, (b) the clan gods and (c) the family gods or the spirits of ancestors. They have no temples. The *jaghi* Birhors worship in a sacred grove called *jilu jayer*, marked by one or more trees and a few blocks of stone. The *uthlu* Birhors carry their gods, represented by stones and wooden pegs, in baskets and worship underneath a tree.

Oraons.—The Oraons or Kurukhs are Dravidians. Nothing definite is known about their origin and wanderings. Their own traditions point to the Deccan as their original home. Either owing to over population, or external pressure, or for some other reasons, which cannot be ascertained at this distance of time, they appear to have gone up the Narbada from the Deccan and then across the Vindhya to what is now the Shahabad district in Bihar. Here they settled down on the hills and valleys as agriculturists and landowners.

The centre of their settlement was Rohtasgarh, the legendary Ruidasgarh of the Mundas and Santhals. They were dislodged from

there by the *mlechchas* who were either Muslim or Hindu. The Oraons relate that they held the fort of Rohtasgarh till they were ousted by the Hindus. In the *District Gazetteer of Shahabad*, we read "The tradition that Rohtas was once the seat of their rule lingers among the Kharwars, Oraons and Cheros.....the Oraons assert that Rohtasgarh originally belonged to their chiefs and was finally wrested from them by the Hindus who surprised them at night during their great national festival, when the men had fallen senseless from intoxication, and only women were left to fight." (Page 175, *Gazetteer of Shahabad* by O'Malley, 1924.)

Being ousted from Rohtasgarh, they split up in two groups; one branch still known as *male* proceeded northward up the valleys of the Ganges or Ganga, and ultimately established themselves on the Rajmahal Hills, and the other branch, the ancestors of Kurukhs, went down the Son and up the north Koel southwards through Palamau into the Chotanagpur plateau where they found the Mundas already in occupation of the country.

The number of the Oraons in this district was 6,350 in 1901, 4,814 in 1911, 7,014 in 1931 and 9,207 in 1941. They are found mostly in the thanas of Barkagaon, Ramgarh and Simaria which are connected to the Oraon country of Ranchi and Palamau. They maintain a very close relation with their kindred there.

The Oraons are divided into a number of clans or *gotras*. They are totemistic. The fauna and flora supply the bulk of the totem names. Marriage between the boys and girls of the same clan is strictly prohibited. But instances, though rare, have occurred of exogamous union and of such union being legalised on paying a fine and providing a feast to the *parha* brethren. The Oraon method of reckoning descent is patrilineal.

An adult male in the village ordinarily wears *karea* or loin-cloth, while old men and poorer people wear only a *bhagoa*. All use *pechchouri* or *barki* to cover the upper part of the body. Women wear *khanria* and *pudhna* or *sari*. The young men and women put on ornaments, mostly of iron or brass. They also make use of flowers, leaves, fruits and stones for ornaments. Their staple food is boiled rice and *dal*. Rice-beer or *haria* is their favourite drink. There are separate dormitories or *dhumkurias* for young boys and girls in a village. The boys' dormitory (*jonkh-erpa*) is under the supervision of the village *mahato*. The girls' dormitory (*pel-erpa*) is generally under an elderly male or female Oraon. Adjoining the *dhumkuria* (boys) is the *akhara* or the dancing ground of the village. Like most of the aboriginal tribes, the Oraons are fond of music and dancing. The Oraon women do not

inherit but enjoy a high and respectable place in the society. The dead are cremated on the *masan* or cremation ground.

The supreme God of the Oraons is called *Dharmes*. They also worship the village gods and the ancestors' spirits. They have faith in *bhuts* or ghosts also. The village priest is known as *pahan*. If the man who originally cleared the jungle from the site which is now the village happened to be a Munda, the Oraons of the village will often have a Munda as their priest, as he will in their view be better able to deal with the village gods. The *matris* or *deonras*, or *sokhas* or *bhagatas* are approached to detect witches.

The principal festivals of the Oraons are *phagu*, *sarhul*, *sohorai*, *kadleta* and *karam* held at different seasons of the year.

The secular head of the Oraon village is called *mahato*. A number of villages make a *parha* or confederacy. It has a *raja*, a *dewan*, a *kotwar* and other officials. The *parhas* have now completely declined in power and influence.

Bhuiyas.—The name *Bhuiya* has been derived from the Sanskrit word *Bhumi* meaning land. Mr. B. C. Mazumdar, in an article published in the *Modern Review of Calcutta* in 1907 (Vol. 1, pages 148—153) explained the name by saying that the Bhuiyas were so called because they were owners or "masters of land" (*bhui*).

In his book, "*An Account, Geographical, Statistical and Historical of Orissa Proper or Cuttack*," published in 1813 (pages 202-3), Mr. Stirling included the Bhuiyas among the Munda tribes. Mr. Dalton has called them Dravidians. Mr. McPherson in his *Settlement Report of the Santhal Parganas* (page 20) probably follows Dalton when he writes, "the Bhuiyas belong to the same Dravidian Stock as the hill Males". Dr. Hutton, in the *Indian Census Report* of 1931, classes the Bhuiyas in the Munda group. Mr. S. C. Roy examined the statements of several authors on the subject and also carefully studied the Bhuiya life specially in Orissa and eventually expressed the opinion that they are a section of the Munda group. This appears to be acceptable.

Nothing definite is known about the advent of the Bhuiyas in this district. Mr. B. C. Mazumdar thought that the Bhuiyas were the earliest settlers of Chotanagpur but other writers maintain that the Mundas were the earliest inhabitants. Whatever might have been the case, it is certain that the Bhuiyas were one of the earliest settlers of the district and for a long time they remained the master of the district. Lister observes "Nothing is known of their historical relations with the Munda-speaking tribes, whose supposed route from the north and

west interests that of the Bhuiyas from the south, more particularly in Hazaribagh " (*Hazaribagh District Gazetteer*, 1917, page 87).

The Bhuiyas had their tribal chiefs. Subsequently, these chiefs were reduced to the condition of tenure-holders by the ancestors of the present Rajas of Ramgarh (Padma) and Dhanwar. They were made Ghatwar or Ghatwal (guard of the hill passes). They did not remain loyal to their kinsmen for long. They assumed the title of Tikaita or Thakur, posed as Hindus, took the caste of Surajbansi Rajputs denying their Bhuiya origin, and installed Hindu *dewans*, generally Babhans, to manage their estates. Mr. McPherson, in his *Settlement Report of the Santhal Parganas* (1898—1907), (pages 20-21) writes thus of these Bhuiya Chiefs: " Their Chiefs make the usual Kshatriya pretensions and calling themselves Surajbansis disclaim connection with their Bhuiya kinsmen. But the physical characteristics are all alike Dravidian, and in Captain Brown's time (1772-78) the Chiefs never thought of claiming to be other than Bhuiya. The highest Chiefs of the Bhuiyas are called Tikaits, and are supposed to have the mark of royalty. Inferior Chiefs are called Thakurs, and the younger members of noble Bhuiya families are called *babus*."

The Bhuiyas now form an element of landless labourers or petty cultivators throughout the entire district except in Kharagdiha Pargana, i.e., thanas Kodarma, Dhanwar, Kharagdiha, Gawan and Giridih where many of them have continued to retain their tenures, the so called Kharagdiha *gadis*, up to the present time. They are dense in the compact block of Huntergunj, Chatra, Chauparan, Simaria and Hazaribagh thanas, and numerous elsewhere, except in Ramgarh, Gomia and Peterbar.

The Bhuiyas who, according to the Census of 1881, stood at the head of the district list of castes, rapidly went on decreasing. This was due partly to the fact, as already stated that the Bhuiyas of wealth and influence became Hindu and ceased to call themselves Bhuiya. Another cause of the decline of their number was, however, their permanent emigration to the tea gardens of Assam, Cachar, Duars and Chittagong. They formed the principal labouring class and were exploited as the best emigrants for the tea districts. The number of emigrants registered in the office of the Deputy Commissioner between 1881-82 and 1891-92 was 35,329, and it can be safely asserted that at least three-fourths of that number belonged to the Bhuiya class. Migration continued till recent years.

The Bhuiyas as a whole are Hinduised at present. They were, as discussed above, aboriginals, but now they are counted as members of the Backward Classes. Their number is very large but their condition is rather poor and pitiable.

The Santhals.—There are 97,836 Santhals in Hazaribagh district according to the Census of 1951. The Santhals speak the Santhali language. Many Santhals also speak the Bengali language. They usually understand some form of *gawari Hindi* or colloquial Hindi as spoken in the district. The Santhali language has no script of its own. The foreign missionaries had introduced the Roman script and had published books, scriptures, collection of Santhali folk-songs, stories, etc., in Santhali language but in Roman script. There has been a recent innovation by the introduction of Devanagri script for publishing books in Santhali language. The Government of Bihar have been publishing a news-sheet "*The Hor-Sambad*" in Santhali language in Devanagri script.

The Santhali language has been described as a rich language. Bodding, who spent many years in the Santhal Parganas as a missionary has made researches into the grammatical aspects of the language besides other foreign missionaries. Their books still remain as the most authoritative literature on Santhali language.

It is note-worthy that although there was no written script for Santhali language human memory as in the case of other tribes like the Mundas and the Uraons had kept up a fund of stories, riddles, folk-songs, proverbs, idioms and sayings handed down from generation to generation. It is only within the last 40 or 50 years that either through the efforts of the missionaries, or the research workers on anthropology or the scholars that certain collections of folk-lore have been made and published. Their folk-songs are superb. As soon as they have a little leisure they will indulge in songs, dances and music. It appears that they snatch every opportunity of life for such festivities. Whether there are changes in the season, domestic occurrences such as marriage or birth or there are traditional offerings or sacrifices to different gods or there is homecoming of the new crops they will indulge in their songs and dances.

There have been collections of some of their songs for *bupla* (marriage); *lagade* (a particular kind of dance akin to *jhumar* dance), *sarhul*, *sohrai* and *karma* festivals in different seasons of the year.

The Santhals have a superb sense of humour. Some of their sayings are typical of their vitality and sense of humour. When a child is born they will say "*Nawa pera ko hec' akana*" meaning "new guests have come" which is an expression for the message that a child is born in the family. To express an acute sense of hunger the Santhal will say "*Lobok' muc' ko geren' kana*" which really means "small ants are eating me up". A polite way of asking a man if he has taken his food will be "*Tala Koram bapla akadea*" the literal meaning of which is "have you married your middle son?" Riddles and problems

are a very good pastime of the Santhals and for this they have got a very rich heritage.

Hazaribagh with its picturesque forests, rivers and hills has a strange fascination for the Santhals. The river Damodar which today lies chained up through the activities of the Damodar Valley Corporation has all along been the very heart-throbs of the life of the Santhals. The Parasnath Hills are their *marang buru* or the sacred hill.

The origin of the appearance of the Santhals in Hazaribagh district can only be guessed. Regarding their original home there has been a belief according to an accepted Santhal tradition that Hihiri, their earliest home, was the *pargana* Ahuri and from there they moved to Khej Kaman and from there to Hara and then to Sasag-Bera and then ultimately to Chai and Champa. Chai and Champa are recognised *parganas* in the district of Hazaribagh. Col. Dalton mentions that traditionally the old fort in Chai was occupied by one Jaura, a Santhal Raja, who destroyed himself and his family on hearing of the approach of a Mohamadan army under Syed Ibrahim Ali *alias* Malik Baya, a general of Mohammad Tuglak in 1353. The Santhal tradition in Hazaribagh is that from Chai and Champa a portion of their community migrated to the Santhal Parganas.

This theory of the movement of the Santhals cannot be said to be authoritative but there may be some truth in this migration. The river Damodar and the hills and forests of Hazaribagh find a very prominent place in Santhal stories, songs and traditions.

The Santhals are divided into several septs, namely, *hansda*, *murmu*, *kisku*, *hembrom*, *marandi*, *tuddu*, *baska*, *besra*, *pauria*, *Chore*, *bedia*, etc. The first seven of these septs are said to have descended practically from the original father and mother of the Santhals, *Pilchu Horom* and *Pilchu Burhi*, while the remaining septs were added afterwards. The septs have certain pass-words by which they are recognised by one another. But the septs *pauria*, *chore* and *bedia* have no pass-words of their own. It is interesting to observe that one of the pass words of *hansda* sept is *tatijhari* which is an important village in Champa *pargana* in Hazaribagh district. This may also be a corroboration of the theory that the original home of the Santhals was in Hazaribagh district.

The Santhals are exogamous and no Santhal can marry within his sept or other sub-septs of his sept. He can marry in any other sept including that of his mother. Regarding the sept of the mother there is a proverb amongst the Santhals signifying that the mother's sept need not be held a taboo for marriage.

Marriage or *bupla* has various forms among the Santhals. Pre-marital sexual intimacy is not unknown and in cases of pregnancy the man concerned is expected to marry the girl or pay a very heavy fine to the village. Polygamy is discouraged. A second marriage is, however, permitted if the wife does not bear a child or the elder brother leaves a widow but even in such cases the second marriage must be done with the permission of the first wife. Here the supremacy of the first wife in the family is well established

The usual marriage forms are (1) *bupla* or *kirin bahu*, (2) *ghardi jawae*, (3) *itut*, (4) *sanga*, (5) *kirin jawae* and (6) *nir-bolok*.

Bupla is the commonest form where marriages are performed with the consent of the parties as also their parents. The bride's price is very nominal, usually Rs. 3. But it is expected that there should be presents of cloth pieces to the girl's people. The price of a divorced woman or a widow is half of the standard rate as it is the tradition that the widow has to be united to the first husband in the next world and the second husband has only a sort of life interest in her.

At the time of actual marriage a thread is passed from the little toe of the bride's left foot to her left ear several times and it is then bound round her arm along with some chillies, rice and *dubgrass*. *Sindur-dan*, i.e., the putting of vermilion mark on the bride's forehead is an essential part of the marriage. It is difficult to say since when *sindur-dan* has become an integral part of the Santhal marriage but here the impact of Hindu tradition is clear.

Ghardi jawae is the form where the bridegroom becomes a part of the family of the bride at least for a period of five years. Usually when girls are difficult to be married off for some reason or other or a deserving homeless or poor boy is found or adopted in the family, this form of marriage is contracted by giving promises of plough, bullocks, rice, etc., to the bride groom. These presents are, however, given to the bridegroom only after five years if he wants to leave the father-in-law's place.

Itut is a form of marriage where a young man forcibly rubs *sindur* (vermilion) on a girl of his choice usually in the village market or at a gathering on some festive occasion. After doing this the young man runs away and waits for the visit of the girl's people to his village. *Sindur-dan* (putting the vermilion on the forehead of the girl) being an integral part of the marriage, the bride's people have got to make the best of the job and exact as much as possible from the bridegroom's people. The bride-price usually becomes double. If, however, the girl still refuses to live with the man, usually she has got to be divorced. *Itut* marriage was also used as an act of vendetta in the olden days. This form of marriage, however, has fallen into disuse.

In this connection it may be mentioned that in the *holi* festival of 1955 six Santhal girls were out for marketing in the bazar of Katihar town in Purnea district when a shopkeeper out of fun put some colour (*abir*) on their forehead. The result was a calamity for the shopkeeper as all the six Santhal girls demanded that he has got to marry them as he has put *abir* on their forehead and ultimately the police had to intervene.

Sanga marriage is meant for the divorced woman and the widow. The actual marriage rite is simple. The bridegroom puts in *sindur* on a *dimbur* flower with his left hand and then he lifts the flower with the same hand and sticks it in the bride's hair.

Kirin-jawae is a convenient form of marriage to meet an inconvenient situation when a girl becomes pregnant or is in love with a young man of her own sept. As inter-marriage within the same sept is a taboo, another young man is procured and given cows, bullocks, paddy, etc., by the young man responsible for the situation. The second young man takes upon himself the odium of the illicit act and the conference called by the village headman usually declares the marriage between the girl and the second man as binding. This social convention leads to the solidarity of the community.

Nir-bolok is a dangerous form of marriage. Here the love-lorn girl just steps into the house of the man she wants to marry and does not come away. Usually she takes a pot of *haria* or rice-beer and does not leave unless absolutely physically assaulted and expelled. Very often the women-folk of the man burns black pepper or chillies to make the woman go or even physically assault the woman. But if the woman stands all this and could stick to the house for one or two days she will have to be considered as the legal wife of the man.

Divorce is permissible but the party not at fault has to be compensated. Divorces are performed in the midst of village assemblies. The husband tears three *sal* leaves in token of separation and upsets a brass pot full of water. If the wife wants to divorce for no fault on her husband's part her people have to return the original bride price paid along with a heavy fine. If the husband wants the divorce, he will have to pay some fine and some customary dues to the woman.

Hindu traditions have a great influence on the customs of child-birth and disposal of the dead. The usual ceremony in Bihar performed on the sixth day of the birth of the child known as *chhathi* is also performed in a Santhal's home. Dead bodies are burnt except in cases of cholera and small-pox. For such deaths the bodies are buried.

Regarding their festivals much has been written before. Santhals have an abandon which is let loose during the festivals. Festivals are

their very life. Some of the festivals are intimately connected with their religious traditions. When the *sal* trees come into flowers during the month of Falgun (February-March) they have their great *baha pooja* which has its opposite number of *bah-parab* amongst the Mundas of Chotanagpur. Some of the festivals like *sohrai* and *sankranti pooja* are common for all the aboriginals of Chotanagpur. During all these festivals tribal or family sacrifices are held and dances and drinking accompanied with songs, flute-music and beating of the drum (*madal*) go on for days and nights, *Sohrai* in the month of Paush (November-December) is called *paush-parban* in Bengal. It is celebrated for the home-coming of paddy, the chief crop of the year. *Sankranti pooja* and *shivaratri* festivals followed by the Santhals are probably borrowed from the Hindu neighbours. The *sankranti* marks the close of the year. The *shivaratri* is marked by fasting and worship of Shiva, the universal God.

Their religion consists of worship of several gods. *Marang-buru* is at the head of the Santhal Pantheon while the other deities are *Thakur*, *Modeko* (Fire God) and *Jal-era*, the deity of the grove which has its counterpart amongst the Oraons and Mundas in the smaller God that presides over the sacred grove known as *sarna*. Each Santhal family has also two sets of Gods of its own, namely, *Ora-bonga*, i.e., household God and "*Abke-bonga*", i.e., great God. They have also now started worshipping Hindu deities like Shiva, Kalimai and Durga.

The Santhals of Hazaribagh district have not attracted as much attention as the Santhals in the Santhal Parganas. The stock is the same and the impact of the present socio-economic forces has brought about changes to the Santhals in the two different areas. It will be recalled that the district of Santhal Parganas was created after the widespread Santhal Insurrection of 1853-55. It was realised that the normal administration was rather unsuitable to the genius of the Santhals. A set of special rules and regulations was made to suit the Santhals. The district of Santhal Parganas was created as a non-regulation district with some special laws. In spite of various touches of modernisation the special rules and regulations of Santhals still remain to a great extent. They particularly refer to the transfer or acquisition of property, mortgage, rent suits, etc.

In Hazaribagh district also there was a big Santhal Insurrection in 1855-56 which had little connection with the rise of the Santhals in the Santhal Parganas. The old records show that the administrators in Chotanagpur Division were very alert that the Santhals in Hazaribagh district during 1855-56 Insurrections did not have any contact with the Santhals elsewhere.

The Santhal rebellion in Hazaribagh district was purely agrarian. The Santhals found themselves faced with an alien rule which little understood them. Their best lands were grabbed by the *mahajans* (money-lenders), or the speculators and they were in perpetual indebtedness. Their tribal laws and *panchayats* were not regarded as sacred. They thoroughly disliked the idea of going to the courts and be tossed about by the hardened court-birds who sucked them well before they could be taken to the lawyer. All these socio-economic causes led to distrust in the administration and this dissatisfaction slowly crystallised. It is really a wonder how the unlettered Santhal Manjhis organised themselves only through a whispering campaign and they rose almost to a man in 1855-56 throughout the district of Hazaribagh.

Their bows and arrows were no match for the guns of the British Army. The zamindars did not give them any help and sided with the ruler. The result was that although the Santhals had a few initial successes here and there the British guns mowed them down. They were hounded from jungle to jungle and were often sandwiched by the British forces. The Santhal villages were burnt mercilessly and their few belongings destroyed. A large number of the Santhal villagers were arrested and were given long term imprisonment. The old records in the Hazaribagh Record Room show that even some Santhal women were put in fetters, marched and put in the prison.

There was again a Santhal rise in 1857 when insurrections broke out throughout the district of Hazaribagh following the mutiny of the Ramgarh Battalion. In this case, of course, the Santhals wanted to recover their previous status, if possible, by utilising the disturbed times. The Santhals gave a lot of trouble to the British Administration in 1857, which practically fell back on Bagodar on the Grand Trunk Road and carried on the remnants of administration from there for some months. The old correspondence records show that the Santhals had come up against at least one detachment and had routed them. It is clear that many of the non-Santhal village headmen had helped the Santhals. The *digwars* and the *ghatwars* who occupied a key position at the hill passages gave considerable help to the Santhals. The movement was, however, put down and Hazaribagh was re-occupied within a short time.

It is a wrong theory that the early Christian Missions had anything to do with the up-rise of the Santhals. The first Christian Missionaries to come to Chotanagpur were the Germans who left Calcutta for Ranchi on February 25, 1845 and travelling by bullock carts *via* Bankura, Purulia and Silli, reached Ranchi on the 2nd November, 1845. They established mission station in Ranchi on the 1st December, 1845. It took them five years to obtain the first converts in 1850. On

9th June, 1850 four Oraon families and on 26th October, 1851, two Munda families were first baptised at Ranchi.

CHRISTIAN MISSIONS.

The first Christian Mission to come to Hazaribagh was the same German Mission described above. It came in 1853. Henry Batch was a pioneer Missionary and he had set up at Singhane within two miles of Hazaribagh after a short stay at Khirgaon in Hazaribagh town. When the Insurrection broke out in 1857 he had to escape along with Captain Simpson, the Magistrate of Hazaribagh, Dr. Delpratt and Mr. Liebert, a German, who had started coffee plantation at Sitagarha, four miles from Hazaribagh. This was on the 31st July, 1857. Missionary Henry Batch came back to Hazaribagh in 1862 and since then missions have continued although there have been various changes in the set up.

The Santhal Mission of the United Free Church of Scotland had started working from Pachamba at Giridih since 1880. Their work at Pachamba and at Tisri was mainly among Santhals and their two fields of activities were medical and education. In those days the best hospitals were the Mission hospitals. The Mission hospitals still continue to be maintained at a high level of efficiency. The Dublin University men came later in 1890 and took up the work mainly at Hazaribagh town. St. Columba's College, St. Columba's Zenana Hospital and schools for boys and girls of various stages are standing monuments of their work.

The Catholic Mission started the work since about 1833 and they have now St. Stanislaus College at Sitagarha which is the oldest noviciate for young Jesuits of Bihar and Bengal. They also maintain hospitals, schools and colleges and an agricultural institute at Sitagarha. The St. Xavier's School in Hazaribagh town started in 1952 only has become one of the best schools in the State of Bihar. There is an excellent girls' school in Hazaribagh town known as Mount Carmel School started in 1956. At Mahesh-Munda in Giridih subdivision a branch has been started of the Roman Catholic Mission since 1953 and already they have taken up the starting of a hospital, a girls' school and a technical school. A large percentage of the Christian block in this district comes from the Santhals.

There is no doubt that the various Christian Missions that have been mentioned above have done a lot to improve the economic level of the Santhals in Hazaribagh district. As a matter of fact the British administration did not have any special department for ameliorating the condition of aborigines in any of the districts of Bihar and practically left this work to the Christian Missions. As a result, it is only the Christian element amongst the Santhals or the other aborigines that

received patronage in the shape of higher education, Government services, etc. The non-Christian Santhals or other aborigines were more or less neglected. It is only very recently that some Hindu Missions, particularly the Aryasamaj have started doing some work amongst the Santhals. Other philanthropic non-Christian organisations such as Ramkrishna Mission, Bharat Shevashram, etc., did not much concern themselves with any sustained work among the aborigines but in cases of distress they have always come forward. It is only after independence was achieved in 1947 that the State of Bihar set up a Welfare Department for the uplift of the aborigines and there are District Welfare Officers for the aborigines in all the districts of Bihar.

The figures of the population of the Santhals show a decline. This is probably due to the fact that many Christian Santhals are not being returned as such. Many Santhals may have been shown as Hindi-speaking or as Hindus. The figures are as follows :—

1915	...	...	...	93,059
1931	...	...	...	1,29,103
1941	...	...	...	1,45,762
1951	...	...	...	97,836

With all the onslaughts of modernism the set up of Santhal village life is still almost the same as it was centuries before although signs of disintegration are quite visible. The *manjhi* or the village headman is the social head of the villagers. He is the link between the zamindar and later their administrator. He is aided by an assistant known as the *yogmanjhi*. There is one *ojha* in every village, who is the religious head. The *ojha* gives his services for propitiating the evil spirits. The *manjhi*, the village secular head, and *ojha*, the religious head, have their counterparts in *mahto* and *pahan* of the Oraons and Mundas in Chotanagpur. The *manjhi* has naturally been more of a casualty due to the courts, abolition of zamindari, and introduction of *gram panchayats*, etc., and has no longer that influence on his folk.

The socio-economic condition of the Santhals was very poor excepting in the case of the Christian Santhals. The *mahajans* and the land grabbing speculators had taken full advantage of the simplicity and thriftlessness of the Santhals. Then came the earlier industrialists, mine-owners, forest-contractors and the like. The Santhals gave their life blood for all these groups throughout the 19th century and a part of the earlier 20th century without getting much benefit for their own. They perpetually remained in debt. It is only recently that serious steps have been taken to improve the condition of the Santhals. The Money Lenders Act has been amended, the Tenancy Laws have been changed and grain *golas* have been set up. Ceiling interests have been

curbed by the changes in the Money Lenders Act. A non-Santhal cannot now straightaway buy a Santhal's land. Grain *golas* loan out seed paddy on easy terms. Special schools, hostels, health measures, *gram panchayats* are some of the recent innovations since 1947, which are expected to do much good to the Santhals.

PASTORAL SONGS.

Pastoral songs are sung by men and women of practically all classes while working in the field at the time of transplantation of crops or at the time of harvesting the fields. The theme is generally relating to some love-affair or some famous battle of the past. They are sweet and melodious. Sometimes, they are in the form of question and answer. They are important for their musical value. These lyrics have been handed down to the present generation and are not recorded. They pass from the older generation to the younger one who memorise it by heart. Due to this many of these songs have been lost.

Different set up of songs depicting a particular background of nature in a particular season is common. With the advent of spring in the month of March, they begin to sing a type of song full of mirth, joy and rather suggestive description of women and their attire which is popularly known as *holi*. This is sung till the festival of *holi* at the end of the month of Falgun. This type of song is uncommon in any other season. With the *rabi* harvest ready in the field in the month of Chaitra, they begin another type known as *chaitra*. These songs weave a thread round the romantic love of the newly-wed couples or lovers. This goes on till the thrashing and storing of *rabi* crop. It marks the close of the cycle of harvests and a fresh start is made by sowing new crops which require water after a month or two. Songs sung during this season, i.e., before the rains set in in the month of Asarh and also during rainy season, i.e., Shravan and Bhado, depict cloudy scenes, torrential rains and thunders of the cloud. This is known as *kajli*. It is also meant to please rain-gods to send rains. Women have their own set up of songs for this season. Some swing on *jhoolas* (swings) and sing *kajli*. Sometimes when rains are delayed, they come out of the village in groups and sing songs said to please rain-gods.

Labourers both men and women are fond of singing while paddy-transplantation goes on in the field. They have a special type of songs for this occasion. Women sing songs full of humour and jokes while men sing romantic amorous songs inviting their sweethearts to come and join them in the pleasant weather. A special type of song known as *birha* is sung on these occasions. Generally the singers go on composing when they sing. There is no established version. These songs are not rhythmic and methodical.

FOLK LITERATURE AND SONGS.

Quite a few such pastoral and folk songs are very good example of rustic imagination and descriptive power. There are some long descriptive songs delineating chivalrous character of some imaginary personality of the past ages. Stories of Alha and Kunwar Vijayee are available in book form. They are very popular. Many villages have got a man who remembers the whole story in fragmentary verse by heart. Sometimes they go on singing such songs for the whole night at the pressing demands of a considerably big audience before them. They sing it at the pitch of their voice and harsher the tone the better is its effect due to the nature of events described in it. They are not accompanied by any musical instrument. Nothing is known about the authorship of these verses.

In recent years, quite a large number of booklets containing folk-songs have been published. Some of these songs are of recent origin: They cover a variety of subjects, namely, religious, political, patriotic, and amorous. Religious songs in everyday language of the people describing one or two events of the life of Rama, Krishna and other saints and heroes, have gained great popularity. They are sung on ceremonial occasions and at the time of any religious function of the village. Inspired by the sentimental value of such songs, the villagers are found humming such notes in their fields while working or grazing cattle there.

One or two remarkable writers of songs in people's everyday language have become very popular. Songs of one Bhojpuri gentleman Bhikhariya are so popular that they have travelled in every nook and corner of the district. These songs are about village life, methods of cultivation and some prevalent undesirable questions such as early marriage, dowry system, etc. They have acted as a powerful satire on many habits of the villagers.

Another writer of importance is the author of anonymous Bideshia Natak. It deals with the life of a villager who was married early and points out the consequences that follow afterwards.

Cinema songs have gained popularity and they seem to be slowly working against the old folk-songs. The present generation does not appear to be impressed by the old music in comparison to the new tilting music of cinema songs. Cinema songs have not, however, got a lasting effect. One popular song is soon replaced by another. The old folk-songs are nearer the life of the villagers and give a truer picture of their life, culture and habits. They have a natural appeal and attraction for the villagers which cinema songs lack in.

A tendency to enrich folk literature in regional languages has been noticed in recent few years among the poets of acknowledged status. They have attempted at producing folk songs and their creation is easily distinguishable from the old folk-songs which were unsophisticated and natural expression of a villager's sentiments.

PEASANT'S CUSTOMS.

Peasants are still very orthodox in maintaining their customs. These customs are coming down from time immemorial. Sometimes, the peasants have to sell their properties and ornaments in order to maintain such customs. Every domestic ceremony, every birth, death and calamity in the family has to be faced in a particular manner with a particular amount of financial drain and that has got to be repeated when similar occasions arise again. A change is coming over very slowly among the few educated peasants who resent animal sacrifices, etc., but they also cannot afford to stop feeding a particular number of Brahmins, etc. The worst opponents of abolition of such customs are the women who get support from the priests of the family whose interest lies in things offered to the deities at such occasions.

WITCHCRAFT.

There is still a popular belief in witchcraft among the non-tribals also in the rural areas. There is a notion among the villagers that by practising certain rites and chanting certain *mantras* on the burial ground during the period of *desarah* and *dewali* festivals, a man or a woman can attain the superhuman power of killing a creature at will and carrying anything wherever he or she likes. Some near or dear one of the family is believed to be sacrificed by the practitioner of the craft in the beginning only after which that superhuman power is bestowed on him or her. Children are supposed to be their easy prey and every mother tries to keep her child away from any woman of the village who is supposed to know this art. There are certain methods of protection such as applying black ointment in the eyes, tying black strings on the forearm of the child and wearing certain metallic ornaments containing blessed ashes or some paper with *mantras* (incantations) written on it. When a child falls ill and is supposed to be under the influence of some witch, a priest or a *tantric* (a believer in Tantric cult) is called or the help of some spiritual deity is invoked to ward off the effects. Fantastic stories of cure by such worships make these unsophisticated people put in a deep faith in the practice. In many cases of serious illness in a village a *tantric* or a man supposed to have got supernatural powers is found doing something simultaneously with the surgeon or the doctor and sometimes he is more relied upon than the latter. The cult of Tantricism in this district is seen by the temple of Chhinnamasta Kali at Gola.

SNAKE WORSHIP.

There is a mythological belief among the Hindus that there is a king of snakes which holds the earth on its head. They feel obliged to it for keeping the earth on its head and thus helping them in living. It is believed that this king of snakes called *Sheshanag* loves to take milk and fried paddy. This food is offered to the snake king in the month of Sravan and snakes are worshipped at that time.

TREE WORSHIP.

Certain trees as *pipal*, *banyan* and *auwla* are worshipped by the villagers. *Pipal* tree is considered to be sacred and nobody generally cuts it down or uses its wood for fuel. Spirits are believed to live on *pipal* trees and they are worshipped if they happen to lie in the village or outside it near a temple, etc. There are some people who regularly pour water at the root of *pipal* tree in belief that a particular deity called Hanumanjee would be pleased with them one day and bestow superhuman powers on them and help them in getting salvation. Other type of trees are significant for specific reasons. Generally they are worshipped because they are considered to be the abode of a particular god, deity or ghost. Women offer *puja* under such trees at the time of marriage and birth in the family. In this way they hope to win the support and help of the spirit living on the trees at the time of marriage or birth. Some trees are important for their own sake. Generally such trees are very old and big. Superstitious women appear to be overawed by the gigantic size and consider that the trees would do harm if they do not offer *puja* to it once or twice in a year.

सत्यमेव जयते

CHAPTER VI.

EDUCATION.

EDUCATION IN 1837.

The district of Hazaribagh was formed in the year 1833. The last District Gazetteer published in 1917, quotes verbatim a letter from Capt. Bird, Officer in charge of the district to Capt. Wilkinson, the Governor-General's Agent. This letter is dated the 12th August, 1837, and gives an interesting account of education shortly after the district was formed. It was in reply to a query made by the Sadr Board of Revenue regarding establishment of a school in Capt. Bird's division and enquired if financial support could be had from the local people. Bird replied to say that no financial support could be expected as "several zamindars with one or two exception are involved in pecuniary difficulties" and as "the wealthy *mahajans* are too much interested in keeping the several *elakadars* in that state of ignorance of which they have already taken advantage to enrich themselves". Regarding the possibility of getting pupils for the school, he mentions that since it is "an isolated situation" not many Government servants bring their families there and "the respectable part of the Native Community do not look upon this station as their home, having their families at Gaya and Patna and if inclined to send their children to a seminary avail themselves of the one established at the later station." He mentions a small school where instruction was confined to the vernacular language and which was attended by 18 to 20 boys.

EDUCATION IN 1855.

The report of Ricketts, Member of the Board of Revenue, published in volume XX of *Selections from the Records of the Bengal Government* (1855) contains the following passage: "There is no Government school at Hazaribagh. At present I do not recommend that a Government school should be established at Hazaribagh. There would be no advantages commensurate with the expense, but I think there will be much advantage in the gratuitous distribution of the cheapest elementary school books to the village schools".

EDUCATION IN 1872.

From the "Statistical account" it appears that there was no Government school of any kind until 1865; and 5 years later Government support was confined to one district school which taught English, 4 Vernacular schools and 3 aided English schools. Altogether these schools had 403 pupils. There was a number of *pathshalas* but they were ordinarily meant for boys of the upper castes. In 1871 when Sir George Campbell's scheme for improving primary education was

receiving attention 3 old *pathshalas* and 43 new ones received aid. In 1872, when a scheme was introduced the number increased to 76 and a training school for *gurus* was opened. There was, however, a lack of enthusiasm in the public about education. This general indifference is ascribed to innate conservatism and disrespect of any immediate return in the shape of employment".

EDUCATION IN 1915-16.

According to the last District Gazetteer, there were 790 institutions out of which 765 were recognised. The total number of pupils in the recognised institutions was 21,323. This number included 164 students at the St. Columba's College which was established in 1899. The percentage of literacy was 23 persons per thousand and of the total population literate males were 43 and literate females were three per thousand.

REASONS FOR SLOW GROWTH.

Compared to other districts with the exception of Palamau, Hazaribagh had the lowest proportion of literates in the State in 1911. From the year 1927 even Palamau scored better in this respect than Hazaribagh. According to the quinquennial review published by the Department of Education of the Government of Bihar the following were percentages of children in the total population in Patna, Palamau and Hazaribagh in the years quoted against them :—

Year.	Patna.	Palamau.	Hazaribagh.
1926-27	4.2	2.3	2.0
1931-32	3.8	2.3	1.8
1936-37	4.6	2.5	2.02
1941-42	4.91	2.52	2.32
1946-47	5.5	2.8	2.4
1951-52	6.6	3.8	3.07
1952-53	...	...	2.9
1953-54	...	...	3.0
1954-55	...	...	3.9

There are several reasons for the low incidence of education in Hazaribagh district. In the first place, the population contains a large aboriginal element which has to a great extent been absorbed into Hinduism. As such it made no direct appeal to the Missionary agencies which have done so much in the way of education in Ranchi and the Santal Parganas. It is only after Independence in 1947 that a large number of schools for backward communities have been opened. The second reason was the same as mentioned by Capt. Bird quoted earlier. The gentry was impoverished and uneducated. It suited the wealthy

mahajans to keep others in ignorance as long as possible. Till the Government was not putting money and effort in educating the public no progress was possible. Again till the desire for education and consciousness of what it could do was awakened in the masses it tended to be only a one-sided effort from the Government. Yet another reason which Lister furnishes in the last District Gazetteer and which held true for sometime, runs thus : " The immigrant Hindus from Bihar who made their permanent homes in the district gradually became isolated from their kindred. Living in a remote and unknown land they were suspected of all kinds of ceremonial neglect and the natural affection of parents combined with religious scruples resulted in their refusing to give their daughters in marriage to residents in Hazaribagh. Thrown on their resources, these latter failed to maintain the same standard of culture as their relations at Gaya and in Patna ". This picture, however, does not hold true any longer due to better communications, more facilities for education and for closer contact with the other parts of the State.

The most important cause, however, is the general state of poverty and even the small children in the family have to contribute to the family income.

PROGRESS OF EDUCATION.

The following table gives the picture of the progress of education in the Hazaribagh district for 1915-16 onwards :—

Year.	Number of schools		Total.	Number of pupils.		Total.
	For boys.	For girls.		Boys.	Girls.	
1915-16	..	..	764	..	..	21,159
1921-22	686	55	741	20,007	1,444	21,451
1931-32	714	63	777	24,734	2,170	26,904
1941-42	774	58	832	45,692	3,120	48,812
1946-47	712	56	768	37,122	3,281	40,403
1951-52	930	71	1,001	54,214	6,923	61,137
1952-53	981	71	1,052	50,803	6,497	57,300
1953-54	1,101	72	1,173	58,426	7,770	66,196
1954-55	1,316	75	1,391	66,276	8,208	74,684

It will be observed that though in the year 1921-22 and in 1946-47 the number of institutions decreased, there was no consequent reduction in the number of pupils. On the contrary there is an actual increase in the number of scholars. The decrease in the number of schools in 1921-22 is due to the abolition of a number of inefficient

primary schools. The decrease in the number of schools in 1946-47 is due to the amalgamation of lower primary schools with upper primary schools and upper primary schools with middle schools. There has been a remarkable increase in the decade from 1941-42 to 1951-52. The incidence in the number of scholars is +12,325 as compared to the previous two decades when it was +21,908 and +5,453, respectively. Even in the decade from 1942 to 1952, it is interesting to note that in the first quinquennium the incidence was only +1,278 and the rest of the increase, i.e., +20,734, occurred in the latter quinquennium after Independence.

CONTROL OF ORGANISATION.

There is a Divisional Inspector of Schools under the Director of Public Instruction for controlling education in the Division of Chotanagpur with his headquarters in Ranchi. He is assisted by a Special Inspecting Officer for Muhammadan Education and a Special Inspecting Officer for the Education of the Depressed Classes.

During 1949-50 when there was an expansion of Basic Education one Superintendent of Basic and Social Education was attached to the office of the Divisional Inspector. There is an exclusive District Inspector of Schools for Hazaribagh district. He is directly responsible to the Divisional Inspector and acts as the Educational Adviser to the District Board and Municipal authorities in all educational matters. For each subdivision there is a Deputy Inspector of Schools who is immediately responsible to the District Inspector of Schools and acts as the Educational Adviser to the Local Board in his subdivision. There are 13 Sub-Inspectors of Schools to look after institutions in the various circles of each subdivision. There is only one Inspecting Officer for girls' education, the District Inspectress of Schools, with her office at Hazaribagh. Prior to 1950, the District Inspectress of Schools, with her headquarters at Gaya, was in charge of the three districts of Gaya, Palamau and Hazaribagh. In 1950 with the increase in the number of institutions there was a redistribution of the jurisdictions. The present jurisdiction of the District Inspectress of Schools of Hazaribagh is Santal Parganas and Hazaribagh.

COLLEGIATE EDUCATION.

There is only one college in Hazaribagh which is now affiliated to the Bihar University. St. Columba's College was founded in 1899 in the central part of the present Post Office building by the Dublin University Mission. The college started with 23 students and with a donation of Rs. 3,000 from Raja Ram Narayan Singh of Ramgarh. In 1904 it was raised to the status of a first grade college. In 1908 it

moved into its own building. Government granted a sum of Rs. 50,000 for building laboratories. In 1912 another sum of Rs. 30,000 was given by the Government towards addition to hostel and another sum of Rs. 27,000 in 1913 for additions to college building. Till 1917 the college was affiliated to the Calcutta University. From 1917 to 1952 the college was affiliated to the Patna University and since then to the Bihar University.

Since 1946 B.Sc. classes have been started. In 1952 a Biology block was completed with monetary help from the Government. The college is affiliated for I.Sc. and B.Sc. examinations in Botany and Zoology. The college also admits girl students. There are at present more than 500 students on the roll.

The Bihari Girls' School and the Mount Carmel School have coaching classes up to I.A. standard for girl candidates who have to appear at the University Examination as private candidates.

Another College at Giridih known as Giridih College, was established in the year 1955, and in the same year it was affiliated to the Bihar University up to Intermediate standard both in Arts and Science subjects. With effect from the session 1956-57 the College has secured affiliation up to Degree standard in Arts. In I.Sc. it teaches Physics, Chemistry, Mathematics and Biology as optional subjects. The number of students is 400 in the beginning of the session 1956-57 as against 203 in 1955-56.

SECONDARY EDUCATION.

The last District Gazetteer mentions five high schools out of which one was for girls. The total number of students in the boys' schools was 883 while that in the girls' schools was 72. The following table illustrates the progress of Secondary Education in Hazaribagh district :—

Year.	Number of schools.			Number of scholars.		Total.
	For boys.	For girls.	Total.	Boys.	Girls.	
1915-16	3	1	4	883	72	955
1921-22	3	1	4	744	30	774
1931-32	3	1	4	1,134	87	1,221
1941-42	7	2	9	1,921	403	2,324
1946-47	12	2	14	4,239	474	4,713
1951-52	17	2	19	6,897	466	7,363

The oldest high school is the Zila School established soon after the Calcutta University was founded, i.e., around 1857. The Dublin Mission High English School was established in 1894. Amongst the girls' high schools, the Giridih Girls' High School is the oldest. It was established in the year 1910. The reason why the town of Giridih which is the headquarters of a subdivision had a girls' high school before the district headquarters had one, was that being on the border of Bengal and enjoying healthy climate, a number of educated Bengalis came to settle in Giridih after retirement and, therefore, the demand for a girls' high school arose. The number of girls in the school in 1951-52 was 175. It is an aided school. The Bihari Girls' High School at Hazaribagh was established in 1914. It started as a Parda Primary school. In 1937 it became a middle school and in 1941 it was raised to the status of a high school. The middle and the high school sections were provincialised in 1950 under the Bihar Government Post-War Development Scheme. The strength of the pupils in the school in 1951-52 was 209.

MIDDLE SCHOOLS.

The last District Gazetteer mentions 7 Middle English schools and 4 Middle Vernacular schools with 595 pupils and 262 pupils, respectively. The statistics from 1916-17 are as follows :—

Year.	Number of Middle Schools.			Number of pupils.		
	For boys.	For girls.	Total.	Boys.	Girls.	Total.
1916-17	12	1	13	1,235	75	1,310
1921-22	14	1	15	928	87	1,015
1931-32	19	3	22	2,443	268	2,711
1941-42	40	5	45	5,447	591	6,038
1946-47	34	5	39	4,950	658	5,608
1951-52	46	4	50	7,343	850	8,193
1954-55	65	5	70	9,212	1,048	10,260

These figures would indicate that the progress of middle schools has been steady. The decrease in 1946-47 both in the number of institutions as well as the number of pupils is probably due to the number of middle schools being changed into high schools, as can be seen from the figures under Secondary Education which show high increase in that year in the number of pupils as well as institutions. The middle

vernacular schools in this district ceased to exist since the year 1944, and all middle schools taught English as a subject in their course of studies. Since the new curriculum reforms brought about in the year 1948, English no longer forms a subject of the middle school curriculum. The oldest girls' middle school was the Bengali Girls' Middle School established in 1872.

PRIMARY EDUCATION.

According to the last District Gazetteer, there were 666 schools, catering for 17,241 pupils. Out of these 47 were Upper Primary with 2,531 students. The statistics for the later decades are as follows :—

Year.	Number of schools.		Total.	Number of pupils.		Total.
	For boys.	For girls.		Boys.	Girls.	
1921-22	644	58	702	16,602	1,430	18,032
1931-32	685	58	743	20,809	1,790	22,599
1941-42	720	50	770	28,181	2,099	30,280
1946-47	661	48	709	27,701	2,127	29,828
1951-52	793	63	856	39,103	3,218	42,321
1954-55	1,144	60	1,204	43,329	6,430	49,759

It will be observed that the highest incidence of increase is in the last decade, the incidence is +12,041 and for the last five years of the same decade is +12,493. This was probably due to the concentrated efforts of the Department of Education for removing illiteracy and on account of primary education, i.e., up to class V having been made free and in some places even compulsory since June, 1949. The decrease in the year 1946-47 is due to the amalgamation of lower primary schools with upper primary schools and for closure of inefficient institutions.

COMPULSORY PRIMARY EDUCATION.

Compulsory primary education only for boys of the age group 6 to 10 years has been in force in all the 17 towns of the State and the same was introduced in the town of Hazaribagh (municipal area) from the 20th November, 1939.

Due to several socio-economic factors governing the lives of the masses the reports on the working of the compulsory scheme in the district have never been satisfactory. The children who should have been at school keep away from it either due to the lethargic attitude of the

parents or to the economic causes which make it imperative for the child to assist the parents in odd jobs to augment the family income.

The following statistical data in respect of the schemes of compulsory primary education in force in the district will prove of interest :—

Year.	Number of schools under compul- sion.	Number of pupils under compul- sion.	Educated number of boys of compulsion age (6 to 10 years).	Percentage of pupils under compulsion to the estimated number of boys of compulsion age.	Percentage of average daily attend- ance.	Total expen- diture.
1	2	3	4	5	6	7
1942	25	1,708	Not available.			
1943			Not available.			
1944	Not available	1,460	1,508	96.8	92	13,296
1945	Ditto	1,614	1,749	92.2	92	12,793
1946	Ditto	1,646	1,821	90.4	93	12,718
1947	Ditto	1,628	1,871	87	85	15,128
1948	Ditto	1,599	1,904	84.7	88	16,498
1949	24	2,198	2,240	98	56.9	Not available.
1950	22	2,289	2,637	86.80	81.28	17,884
1951	22	2,295	2,648	86.66	81.59	27,318
1952	20	1,507	2,709	57.95	80	24,044

BASIC EDUCATION.

Basic education was for the first time introduced in this district in 1949 when the Marangmarcha and Marumandhe basic schools were opened on the 1st of March. At present there are 21 Basic Schools out of which nine have been converted from Middle schools into Senior Basic, and nine have been converted from Primary into Junior Basic. Only three schools are entirely new out of which one is at Bokaro and another at Bihar Military Police Camp and the third is located at Bachhai, Chauparan Police-station. In the year 1951-52, there were 1,794 boys and 48 girls in the nine Senior Basic schools and there were 869 boys and 109 girls in the 12 Junior Basic schools. All these institutions are co-educational. The number of students in these Basic schools in 1954-55 was 1,877 boys and 141 girls in the Senior

Basic and 752 boys and 17 girls in Junior Basic schools. The expenditure on the Senior Basic schools for 1951-52 was Rs. 44,105 from the Government funds and Rs. 11,271 from other sources totalling up to Rs. 55,376. On the Junior Basic schools the expenditure in 1950-51 was Rs. 57,427 out of which the Government contribution was Rs. 47,890. For 1951-52, the State Government spent Rs. 28,573 and income from other sources was Rs. 1,250 which totalled up to Rs. 29,829. The total expenditure on the Senior Basic schools for the year 1954-55 was Rs. 84,687 of which Rs. 81,445 was incurred by the State Government and Rs. 3,242 furnished from other sources. On the Junior Basic schools the expenditure in 1954-55 was Rs. 43,363 out of which the Government contribution was Rs. 42,502 and Rs. 861 came from other sources.

REFORMATORY SCHOOL.

Hazaribagh Reformatory School is a unique institution. After Queen Victoria's Proclamation a European Penitentiary was established at Hazaribagh in 1858. In letter no. 1035, dated the 16th August, 1881, from the Home Department, Government of India, a proposal was made to utilise the vacant European Jail buildings at Hazaribagh as a Reformatory School for all juvenile offenders convicted in Chota Nagpur and Bihar. The Government of India, Home Department, in letter no. 484, dated Simla, the 8th April, 1882, sanctioned the establishment of the Reformatory School at Hazaribagh under the provision of Act V of 1876. This institution was placed under the Judicial Department of the Bengal Government and the Superintendent of the District Jail was given an allowance of Rs. 100 for the task of running the Reformatory School. The control of the school was subsequently transferred to the Education Department in 1900.

Blacksmithy, carpentry, tailoring and gardening are some of the items to keep the inmates of the institution occupied.

In 1908 the Government of India closed the Alipore Reformatory School in Bengal and amalgamated that school with this institution. The juvenile offenders of the Native States also used to be sent to the Reformatory School besides the juvenile offenders from Bengal.

The purpose of the school was to give intellectual, vocational, physical and social training to the boys so that after release they could become useful citizens capable to earn their livelihood. The jail atmosphere has been removed to a very great extent and the guards are now replaced since 1921 by educated house-fathers to take charge of the boys for their education, reformation and general welfare. The

well-equipped workshop and the qualified technical staff meant to teach different trades to the inmates were also made available for boys living outside the school. There is now an Industrial Diploma class with five years' theoretical and practical training since July, 1939. The school has an Agricultural Farm covering about 50 acres of land.

POLICE TRAINING COLLEGE.

With the separation of the three provinces (1) Bengal, (2) Assam and (3) Bihar and Orissa in 1912, the Police Training College for Bihar and Orissa was established at Hazaribagh that very year. With the separation of Orissa, the Orissa cadets and those of the Feudatory States, who used to be sent to Hazaribagh ceased to come since 1941 and 1947, respectively.

The Police Training College is housed in a *pucca* double storied building. Accommodation for 70 cadets can be arranged in this building upstairs while downstairs there are rooms for different classes for cadets and offices for the Principal and other Officers. There is also an armoury for keeping the rifles, etc. There are stables for 20 horses. The Police Training College has its own hospital.

About 100 literate constables are trained in the Assistant Sub-Inspectors' Wing. They are accommodated in a separate building.

The Police Training College formerly trained Indian Police Officers; Indian Police Service Officers are now trained at Mount Abu. After their training there they are sent to this Police Training College for being taught the local Acts, Police Manual, etc. The Police Training College trains Police Officers of all ranks from literate constables to Deputy Superintendent of Police. Battalion Commandants of the Home Guard, and Excise Sub-Inspectors are also trained here. There is a proposal to train here the Inspectors of Society for Prevention of Cruelty to Animals. The period of their training varies according to the type of courses they undertake. New methods of training are being introduced from time to time to keep pace with the advances made in criminology and other allied sciences. The chief subjects taught are : (1) Criminal Law, (2) Police duties, (3) Parade, (4) Riding, (5) First Aid and Medical Jurisprudence, (6) Motor mechanism (7) Survey, (8) Photography and (9) Criminology.

The staff comprises of the Principal, who is a Senior Superintendent of Police, six Inspectors, one of whom acts as the Superintendent and is the Second-in-Command (usually he gets the honorary rank of Deputy Superintendent of Police), six Sub-Inspectors, one Riding Master, five

Havildars and one Medical Officer. Besides the above instructors, there is one Excise Sub-Inspector. Cadets are sent here for training every six months.

On the 25th November 1952, Dr. S. K. Sinha, the Chief Minister of Bihar, presented Colours to the Police Training College. This is a great honour to the institution being the first unit to receive Colours.

ST. STANISLAUS COLLEGE.

The oldest Noviciate for young Jesuits of Bihar and Bengal was started in Hazaribagh Parish in April, 1873, and lasted only till 1887. The new Noviciate was opened in Sitagarha in March, 1932. The new building was occupied in 1935. The Tertianship was added to this early in November, 1950. Jesuit Noviciates and Tertianships form the three years of spiritual training of a Jesuit's formation that lasts normally from 12 to 15 years. The Indian Jesuits from Bihar and Bengal usually start their first spiritual training at Sitagarha. Young Indian Jesuits who started their training at Hazaribagh in past years are now found throughout India in colleges in the various cities and also in the mission fields.

AGRICULTURAL INSTITUTE IN SITAGARHA.

The Agricultural Institute in Sitagarha in the splendid setting of an organised farm with gardening, tree growing, poultry keeping, dairy farm, fishing department, etc., was started in 1950 sponsored by the Bihar Government and by Sewagram, Wardha. The total grant received by the Agricultural Institute in 1951-52 was Rs. 36,120 for stipends and Rs. 28,000 for building and equipment. In 1952-53 only Rs. 36,120 was received for stipends. The school is attended by students both from North and South Bihar, belonging to various castes and creeds. The senior course takes in students from Matric to B.A. or B.Sc. The junior course takes in middle-passed students and students of various high school standards. The institute has already rendered great services in preparing the teachers required by the various grades of Basic Education and enlightened farmers.

ST. XAVIER'S SCHOOL.

St. Xavier's School is the first institution in Hazaribagh taken up by the group of Jesuit Fathers who have come from Australia. It was opened in January, 1952. Students from all over Bihar and neighbouring States are flocking in great numbers to this high class Cambridge School.

NEW PARISH CENTRE.

The present centre of the Mission in Hazaribagh town is situated in the buildings given by the late Mrs. Von Fugger to the Roman Catholic Mission. A middle school with boarding is attached to this Parish which is called the Catholic Ashram. This Ashram is situated opposite to an old Christian Cemetery on the road to the Police Training College. A new church has been built in Indian style by the Rev. Fr. E. DeMoulder, S.J., Parish Priest from January, 1949 to January, 1953. The present Parish Priest is the Rev. Fr. K. Grogan, S.J., an Australian. The Parish Priest of Hazaribagh is the *ex officio* Assistant Director of the Catholic Co-operative Society with headquarters at Ranchi. Several schools and some model villages are being built in various villages and collieries. The best known model village is in Mardanpur near Chatra. Farmers of all castes and creeds are being helped in their land problems and in their efforts for village uplift.

LIBRARIES.

There are 35 public libraries in the district that receive recurring and non-recurring grants from the Government.

THE PUBLIC LIBRARY, HAZARIBAGH.

The Public Library, Hazaribagh, was founded on the 16th August, 1922, by a few enthusiastic students of the town with only thirty books in hand. These enthusiasts bent upon developing the library, used to sell tea during its infancy, to help it with the savings, during Durga Puja and Muharram. Now and then they used to play dramas as well to help financially their new-born institution.

The library receiving such help from its workers and from the public of the town went on growing day by day till it attracted the notice of the Government officials and eminent public men of the district who helped it both with money and advice.

Now the library has got more than 5,000 volumes and subscribe not less than a dozen of monthly and daily papers. The average daily attendance of the readers and visitors to its reading room is about 50 and an average of 75 books is daily issued. The paying members on the roll number about 150 per month.

The library was so long housed in a rented building in a lane but it has now got a house of its own in the Rukmini Bhawan to commemorate the memory of the beloved wife of Sri Krishna Ballav Sahay, the Revenue Minister.

ST. COLUMBA'S COLLEGE LIBRARY.

The College Library was founded about 54 years ago with a very limited number of books. Every year volumes have been added and at present there are about 11,000 volumes. Till about five years back the library got an annual recurring grant from Government of only Rs. 900. Since then the annual grant has gradually been increased and at present (1953) it is Rs. 3,000.

THE UNION CLUB AND LIBRARY.

The Union Club and Library, Hazaribagh, was established in 1882 and is located in the spacious building known as Keshab Hall. It is the oldest library in the district and has a good stock of books. The attached Club Hall is the venue for public lectures on cultural and social meets. The library has a stock of 8,558 books. There are 183 paying readers and the daily average attendance is 100. In 1954-55 the library received Rs. 120 as Government grant. A new building is under construction.

THE HIND LIBRARY, GIRIDIH.

The Hind Library at Giridih was established in the year 1936. There are 2,000 books in the library. The number of paying readers is 115 and the average daily attendance is 50. It has received Rs. 90 as grant-in-aid from Government during the year 1954-55. The land for the construction of the building is under acquisition. There are also two other libraries, namely, Urdu Library and Jai Hind Pustakalaya at Giridih.

In Chatra there are two libraries, namely, Jan Sahayaka Samiti Library and V. J. Institute. The Saraswati Pustakalaya and Kodarma Union Club Library at Kodarma are serving useful purpose in the growing township of Kodarma. The Shri Krishna Pustakalaya and Bihar State Labour Welfare Centre Library are located in Jhumri Tilaiya. A small library has been started at Domchanch.

CHAPTER VII.

PUBLIC HEALTH.

DIET.

The common diet of the common man consists of rice, wheat, maize, *sattu*, *mahua*, green vegetables and potatoes. They mainly depend on carbohydrate diet and very occasionally take animal protein and fats. In some parts of the district specially in Chatra subdivision the poorer classes of people live on roots, bulbs and various other jungle fruits during the rainy season. No particular estimate has been made regarding caloric value, but it could be presumed that the majority of the people live on food which does not have the normal caloric value. It is only the persons of higher income group which forms a very small percentage of the population that can afford to have food possessing sufficient caloric value. In urban areas there is, of course, a variety of vegetables like cauliflower, pea, cabbage, beet, etc. The consumption of eggs is also mostly confined to the well-to-do people. There has been very little change in diet so far as the average villager of lower income group is concerned. But with well-to-do people whether in the villages or in the urban areas there has been a certain amount of change in diet and also in the method of cooking. *Ghee* is confined to the upper class while hydrogenated fat or oil has become the common cooking medium with the middle class population.

SANITATION IN RURAL AREAS.

Sanitation in the rural areas is practically non-existent. Villages comprise a group of mud built houses, ill-ventilated, dark and damp in most cases. The poorer people often occupy the same room along with the domestic cattle. The residential houses are irregular, scattered in the villages with narrow roads in between and the wash water of every household is either accumulated or is left to dry out itself. The villages have ditches and bushes and scattered heaps of cow-dung are a common sight. The village roads have no drain on either side and the stagnant water in ditches breed mosquitoes and flies in abundance. In this district wells are practically the only source of drinking water. The number of *pucca* wells in the villages is rather small. *Kutchha* wells, springs or streamlets usually provide water to the people. There are hardly any provision of latrine in any of the villages and people resort to promiscuous defecation on the land all round the village. This gives rise to gastro-intestinal diseases and worms infection. With the enlargement of the Public Health staff in the district an extensive propaganda in the villages to educate the masses on sanitation and preventive measures has been in progress.

SANITATION IN URBAN AREAS.

The sanitary condition of the urban areas has considerably improved. The largest town in the district is Hazaribagh which is the headquarters of the district. Giridih, the subdivisional headquarters of the subdivision bearing the same name, is also an important town. Chatra, the headquarters of the subdivision bearing the same name and Kargali, a colliery town have considerable importance. Some of the growing townships in the district are Ramgarh, Bokaro, Bagodar, Golah, Jhumri Tilaiya, Kodarma and Saraiya (Hazaribagh Road Station). Large villages which are on the way to grow into township are Mirzaganj, Dhanwar, Chitterpur, Ichak and Peterbar.

Hazaribagh, Giridih, Chatra and Kargali towns have Municipalities while Ramgarh has a Cantonment Board. Some of the villages and growing townships mentioned above are under Union Boards or Gram Panchayats. Jhumri Tilaiya has got a Notified Area Committee.

Hazaribagh Mines Board is another autonomous body like the Hazaribagh District Board. The Mines Board is incharge of five widely separated coal-field areas in Giridih, Bermo, Gomia, Mandu and Ramgarh police-stations. Altogether there are 40 collieries under the Mines Board with their outlying villages. The area is about 150 square miles with an approximate population of two lakhs.

ADMINISTRATIVE ORGANISATION.

The Civil Surgeon is the administrative head of the State Medical Department for the district. He is in overall charge of the State hospitals and dispensaries and has also a right of inspection over all the hospitals and dispensaries whether they are maintained by the District Board, Mines Board or any other bodies. The public health activities are under the District Health Officer who is a qualified doctor appointed by the State Government. He works under the guidance of the Chairman of the District Board. The Civil Surgeon has also a good deal of responsibility for public health activities of his district. Whenever there is an epidemic or an extraordinary situation calling for emergency sanitation measures the Civil Surgeon keeps in touch with the Public Health Department and co-ordinates their work. The Civil Surgeon has not much to do with the Mission hospitals but his inspections are not un-welcome.

Indigenous method for cure is still followed in the rural areas. Treatment by Homeopathy, Kaviraji, Unani and even witchcraft is widely prevalent in rural areas. Most of the unqualified Homeopaths, Kavirajs and Hakims are practising in rural areas. No doubt they do

some benefit to the public but very often more harm is committed due to their ignorance. Most of these indigenous practitioners also stock Allopathic medicines and even administer injections and other Allopathic toxic medicines the action of which they may not know. In normal cases of pregnancies and child births nothing particular is done but in abnormal cases, i.e., if any pregnant woman suffers from Eclampsia or other diseases, most of the villagers think the disease to be associated with some evil spirit and resort to witchcraft. Child or maternity welfare measures have not yet taken to the average village. Birth control clinics are absent throughout the district. Some indigenous medicines like dried ginger, black pepper, *isafagul*, *pudina*, *chiraita*, *tulsi* leaves and various other herbs and roots are commonly used.

INDIAN MEDICAL ASSOCIATION OF STATE BRANCH.

There is a District Organisation under the State branch of the Indian Medical Association in Hazaribagh. The Civil Surgeon is the Chairman. The number of qualified registered medical graduates practising within the district is not definitely known but is believed to be much larger than the members of the District Organisation under the State branch of Indian Medical Association. Besides the qualified doctors following Allopathic treatment there are a vast number of qualified doctors of other lines of treatment such as Homeopathy, Kaviraji and Unani. There is no information of any organised Association of such doctors.

ORGANISATION FOR SANITATION AND PUBLIC HEALTH.

The sanitation and public health throughout the district are looked after by the local bodies, namely, the District Board for the rural areas and the Municipalities for the urban areas. Besides this, a Notified Area Committee has recently been constituted in Jhumri Tilaiya with the Subdivisional Officer, Sadar as the Chairman. The sanitation of Ramgarh Cantonment is looked after by the Cantonment Board while that of the Coal Mining Areas by the Hazaribagh Mines Board, and by the Coal Mines Welfare Organisation of the Government of India. Recently, a Mica Mining Welfare Organisation has been constituted but its efforts have so far been primarily directed towards curative objects.

The Hazaribagh District Board maintains its own Health Department under a Health Officer. The Health Officer belongs to the Bihar State Public Health Service whose services are lent to the District Board. The Department consists of one Assistant Health Officer for each subdivision and an Epidemic Staff in each police-station consisting of one Health Inspector and two Disinfectors. The main

work of the Health Inspectors are : (1) prevention and control of epidemic outbreaks, especially of cholera and small-pox; (2) improvement of rural sanitation; (3) health-education; (4) prophylaxis against malaria; (5) general sanitation duties. They work in close co-operation with the Medical Officers of the dispensaries. Generally, the Health Department works in close association with the Medical Department and under the administrative control of the Civil Surgeon.

In addition to this, the Union Boards also are responsible for sanitation in their own respective areas or jurisdiction. They are : (1) Ichak Union Board; (2) Barki Sariya Union Board; (3) Chitterpur Union Board; (4) Gola Union Board; (5) Dhanwar Union Board; and (6) Mirzaganj Union Board. They receive a contribution from the District Board. The Union Boards are now being replaced by Gram Panchayats. The Gram Panchayats are also charged with the responsibility of the sanitary measures of the areas under them.

Like the District Board the Municipalities also maintain their own Health Department. Giridih Municipality has been given a qualified Health Officer belonging to the Bihar State Public Health Service. Hazaribagh Municipality maintains an Assistant Health Officer while Chatra Municipality and Jhumri Telaiya Notified Area Committee employ Sanitary Inspectors. The Hazaribagh Mines Board employs a Medical Officer as its Health Officer.

The statement given below shows the expenditure of the District Board towards measures of public health and sanitation :—

Years.	Public Health.			Vaccination.			Total.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1941-42	16,270	6	3	..			16,270	6	3
1942-43	18,946	10	3	..			18,946	10	3
1943-44	22,201	15	7	..			22,201	15	7
1944-45	19,244	1	11	3,359	1	0	22,603	2	11
1945-46	29,780	7	0	6,430	9	3	36,211	0	3
1946-47	43,927	12	3	5,666	11	7	49,594	7	11
1947-48	47,391	1	3	5,192	15	6	52,584	0	9
1948-49	53,480	2	0	5,589	10	0	59,069	12	0
1949-50	56,131	13	9	4,986	5	0	61,118	2	9
1950-51	63,992	10	6	8,111	0	0	72,103	10	6
1951-52	87,482	15	6	33,446	0	6	1,20,929	0	0
1952-53	1,10,182	13	0	36,427	13	0	1,46,610	10	0
1953-54	1,35,645	4	9	33,163	5	1	1,68,808	9	10

The statement below is an indication of the work done by the Public Health Department from 1942 to 1953 :—

Years.	Inoculation.	Disinfection.	Vaccination.	Staff.
1942	25,070	5,703	70,810	62
1943	98,339	10,776	73,772	65
1944	19,168	2,399	98,934	46
1945	99,787	11,749	1,83,065	78
1946	1,21,371	22,087	1,84,863	87
1947	2,28,927	32,018	1,68,267	80
1948	3,02,886	27,976	1,94,012	78
1949	2,43,942	23,724	1,49,047	82
1950	2,56,915	19,252	1,70,689	91
1951	2,16,122	36,652	5,56,594	192
1952	5,27,657	1,00,617	4,54,046	192
1953	6,26,435	66,449	2,68,128	192

The table above shows that the activity of the Health Department is steadily increasing, although there has been a sudden fall in respect of disinfection and vaccination in the year 1953.

VITAL STATISTICS.

The figures for births and deaths from 1942 to 1953 are as follows :—

Years.	Births.	Deaths.	Birth rate per mille.	Death rate per mille.
1942	43,323	26,920	24.7	15.1
1943	30,294	31,504	17.4	17.6
1944	30,807	24,662	17.4	13.7
1945	43,395	28,675	24.2	15.7
1946	39,776	23,127	22.1	12.6
1947	28,422	20,626	15.7	11.1
1948	27,645	16,154	15.0	8.7
1949	26,873	14,048	14.4	7.0
1950	24,750	16,365	13.3	8.5
1951	27,622	14,018	14.7	7.2
1952	30,359	16,361	16.28	8.77
1953	31,436	17,217	16.84	9.78

It will be seen from the above figures that both birth rates and death rates have steadily diminished. It is difficult, however, to estimate to what extent these figures are accurate but the trend suggested by them tallies fairly with the all-India figures. It will be seen from the figures that there is an excess of births over deaths so that the resident population of the district is definitely increasing.

The reporting agency in the rural areas is still the village Chaukidar who reports the vital statistics to the police-stations on every parade day. These figures for the thana area are compiled by the officer in charge of the police-station and forwarded to the Civil Surgeon for onward transmission to the Director of Public Health, Bihar. The work of the Chaukidar is supposed to be checked by the Subordinate Police and the Vaccination Staff.

The village Chaukidar has also to give the causes of deaths. It cannot be expected that the Chaukidar will be able to give the accurate cause and many diseases are apt to be described vaguely as fever. Accurate figures regarding infant and maternal mortality are sadly lacking.

PRINCIPAL DISEASES : CHOLERA AND SMALL-POX.

The tables below give the figures of mortality from cholera and small-pox from 1942 to 1953 :—

CHOLERA					
Year.		Deaths.			Death-rate per mille.
1942	..	.. 903	..	..	0.5
1943	..	.. 3,633	..	..	1.9
1944	..	.. 668	..	..	0.4
1945	..	.. 957	..	..	0.5
1946	..	.. 872	..	..	0.5
1947	..	.. 843	..	..	0.4
1948	..	.. 458	..	..	0.25
1949	..	.. 280	..	..	0.15
1950	..	.. 534	..	..	0.3
1951	..	.. 116	..	..	0.06
1952	..	.. 397	..	..	0.16
1953	..	.. 131	..	..	0.06

SMALL-POX

Year.		Deaths.		Death-rate per mille.
1942	..	.. 264	..	.. 0.1
1943	..	.. 207	..	.. 0.1
1944	..	.. 335	..	.. 0.2
1945	..	.. 775	..	.. 0.4
1946	..	.. 336	..	.. 0.2
1947	..	.. 78	..	.. 0.04
1948	..	.. 156	..	.. 0.07
1949	..	.. 59	..	.. 0.03
1950	..	.. 147	..	.. 0.08
1951	..	.. 641	..	.. 0.35
1952	..	.. 58	..	.. 0.03
1953	..	.. 15	..	.. 0.09

VACCINATION.

सत्यमेव जयते

Before the year 1944 the Vaccination Department used to run separately under the Civil Surgeon, Hazaribagh, who was the Superintendent of Vaccination for the whole district. From 1943 onwards, the Health Officer became the Superintendent of Vaccination for the rural areas of the district, while the Civil Surgeon continued to be the Superintendent for Municipal areas. The practice obtaining previously was that the vaccinators were given a license to perform vaccination in areas allotted from October to April and no vaccination staff was maintained from April to October. This system was changed in 1950 and whole-time paid vaccinators were appointed who work throughout the year under the direct responsibility of the local Health Inspector. Each vaccinator is allotted an area roughly having a population of 30,000 and vaccination and re-vaccination work is done throughout the year. Under the licensing system the vaccinator was allowed to realise a fee of 4 annas for each primary vaccination done at home but now vaccination has been made free and compulsory. An

Inspecting Staff consisting of one District Inspector and one Sub-Inspector of Vaccination is maintained at Hazaribagh and Giridih respectively. Besides this the work of vaccination is also inspected by the Health Officer, Assistant Health Officer and Health Inspector.

Statistics of vaccinations done from 1941 to 1953 are as follows :—

Year.	Number of vaccinators.	Period of duty.	Number of vaccination.		Total.
			Primary.	Re-vaccination	
1	2	3	4	5	6
1941	44	6 months	40,460	51,419	91,879
1942	44	Ditto	40,363	30,447	70,810
1943	44	Ditto	40,211	33,561	73,772
1944	50	Ditto	38,354	60,580	98,934
1945	52	Ditto	38,615	1,44,450	1,83,065
1946	52	Ditto	50,509	1,34,354	1,84,863
1947	56	Ditto	43,084	1,25,183	1,68,267
1948	56	Ditto	43,269	1,50,743	1,94,012
1949	56	Ditto	49,855	99,192	1,49,047
1950	56	Ditto	49,881	1,23,808	1,73,689
1951	56	1 year	53,919	5,02,675	5,56,594
1952	64	Do.	45,021	4,09,025	4,54,046
1953	71	Do.	26,036	2,42,092	2,68,128

MALARIA.

Malaria, however, remains the most important disease in the rural areas of the district and claims the largest number of victims. Exact figures regarding incidence of malaria are not available except for those attending the dispensaries and anti-malaria centres.

Extensive malaria surveys were carried out in 1951 and the statistics collected are shown below :—

Name of the areas.	Number of villages.	Police-station.	Spleen Rate.	Parasite Rate.	Population involved.
1	2	3	4	5	6
Jori ..	22	Hanterganj	21.3 per cent	15.3 per cent	6,421
Dantar ..	17	Ditto	34.3 „	30.6 „	2,870
Chatra ..	21	Chatra ..	17.9 „	13.7 „	12,515
Madhuban	16	Pirtand..	44.3 „	30.6 „	..

Besides this, sample surveys were carried out in a number of villages from time to time which corroborate the high incidence of malaria in certain specified areas.

In August, 1951 malaria survey was carried out in villages Jori and Dantar and the surrounding villages of P.-S. Hunterganj and in the subdivisional headquarters of Chatra. The mode of living of the bulk of residents in this area being primitive the people do not cover their person adequately and are exposed to malaria infection. On investigating the malaria endemicity it was found that the area under survey varied from hyper-endemicity to low endemicity as 55.5 per cent, 58.3 per cent and 45.4 per cent. Spleen rate was recorded at villages Kewal, Dhoboe and Dadhab respectively. The other villages showed low to high endemicity. High parasite rate of 15.3 per cent to 13.7 per cent had been recorded in the villages mentioned above.

Malaria transmission season in this area starts from August and lasts up to December but malaria cases are treated almost throughout the year. There is high incidence of malaria attacks from June to October.

The most prevalent vector species is *A. culicifacies* which was collected from dwelling as well as non-dwelling places. *A. fluviatilis* which is also suspected to transmit malaria during the cold weather was not found despite thorough search.

In September 1951 malaria survey of Parasnath Hill area in the Giridih subdivision of the district was carried out. Being a hilly area it is very thinly populated. The people of the area are mostly aboriginal and live in mud-wall and tiled roof houses. Ventilation and drainage are almost unknown and cattle sheds are seldom separated from home dwellings. Food and clothing are also of primitive type with the result that the people are exposed to malaria infection for most of the area. On investigation it was found that 64.2 per cent of the population suffered from malaria at villages Manjidih and Telebujna.

In this area malaria transmission starts in August and ends in February. The highest incidence was found in December. During this period visitors come to offer prayers in the Jain temple and stay in the buildings attached to the temple for a considerable time. Some of the visitors coming from highly malarious places become a source of transmitting malaria. High percentage of spleen rate and parasite rate bears testimony to the fact that this area is what is technically known as an area of hyper-endemicity.

A Malaria Control Unit was set up by the State Government in July, 1952. The unit is stationed at Isri Bazar and is responsible for controlling malaria in the Parasnath Hills and surrounding villages by the popular method of D. D. T. spraying.

Malaria control measures have also been taken in hand in some other selected areas. On account of the wide prevalence of malaria in the district, a Special Anti-malaria Organisation is maintained by the District Board with Government contributing a substantial share of the expenditure. Eight Anti-malaria Dispensaries are run by the Health Department in the malarious area of the district which act as prophylactic-cum-treatment centres and are staffed by Medical Officers. At present, the centres are situated in the following places:—

- (1) Kathkamsandi, (2) Buzurg Nano, (3) Pirtand, (4) Chordaha,
- (5) Kanhachatty, (6) Jori, (7) Lawalong, (8) Kunda and
- (9) a subsidiary centre at Dantar.

A beginning has been made in Malaria Control Operation in Madhuban area and it is contemplated to improve this aspect of anti-malaria operation by taking up work in four more areas. Besides this, the local Health Inspectors also distribute Paludrine tablets for prophylactic purposes.

The statement below shows the anti-malaria activities of the District Board :—

Year.	Number of Anti-Malaria Centres.	Number of Malaria cases treated.	Number of Paludrine tablets distributed.
1946	4	3,723	1,44,751
1947	6	7,653	1,00,882
1948	7	11,925	1,02,668
1949	7	11,283	1,93,974
1950	8	10,774	1,08,587
1951	8	16,893	1,12,810
1952	9	32,337	1,40,119

Exact figures regarding the incidence of other diseases are not available. It may be noted that there are no endemic centres for cholera and small-pox in this district and the infection generally comes from outside.

LEPROSY : YAWS.

The incidence of leprosy is high in Peterbar and Jaridih police-stations, especially in the villages adjoining Manbhum district and in Markacho area in Kodarma police-station. A special Leprosy Clinic is run in Markacho Dispensary. Lister had mentioned Leprosy in Hunterganj area. Yaws are prevalent in Semariya and Pratappur areas and the dispensaries at these places receive special grants from the Government for treatment of yaws.

MEDICAL INSTITUTIONS.

There are altogether 53 Allopathic hospitals and dispensaries in this district. Out of this there are 4 State Special Hospitals, 22 District Board Dispensaries, 5 Mission Hospitals, 2 under the Managing Committee, one under Ramgarh Cantonment Board, 7 under the Collieries, 3 under Railway, 3 under Mica Mines Welfare Organisation and 3 are under Damodar Valley Corporation. Over and above this there are two mobile medical units at Kodarma and Dhorakola under the Mica Mines Welfare Department.

There are also seven Homeopathic, eight Ayurvedic and two Unani subsidized dispensaries under the District Board. There is a well organised Homeopathic dispensary run by the Brahma Samaj in Hazaribagh town.

STATE PUBLIC HOSPITALS.

The State Public hospitals are :—

- (1) Sadar Hospital, (2) Giridih Subdivisional Hospital, (3) Kasmar Provincialised Dispensary and (4) Chatra Subdivisional Hospital.

(1) *Sadar Hospital.*

It was first opened in the heart of the town and financed by the Municipality. The exact date of its opening cannot be ascertained as the old records of the hospital are not available but it was probably established in 1869 just after Municipality started functioning. This hospital was shifted to the present site in 1899 having accommodation for 26 beds. The Hazaribagh Charitable Committee was formed in 1900 and it was financed by the District Board and the Municipality. In the year 1913 the name of the institution was changed from Hazaribagh Charitable Hospital to Hazaribagh Sadar Hospital. In the year 1936, the old Sadar Hospital buildings were found in a dilapidated condition due to earthquake of 1934. Help from several quarters was sought for. Ramgarh Raj, under the court of wards, generously contributed Rs. 67,000 and the Athletic Association, Rs. 5,037 for building purposes. The Government also made a grant of Rs. 10,500 and the present Sadar Hospital buildings were constructed out of this money. On the 21st January, 1939 the new Sadar Hospital building was opened. Subsequent to this many other improvements were made. An X-Ray apparatus was installed in the year 1942. The hospital has been provincialised since 1st April, 1945. There has been a T. B. Clinic since 1938. After its provincialisation a ten-bedded T. B. Ward has been added. The present bed accommodation is 61. A Maternity and Child Welfare Centre is functioning in this hospital under the supervision of lady doctor of the hospital.

(2) *Giridih Subdivisional Hospital.*

Formerly it was known as the Rattray Charitable Dispensary and was managed by a Managing Committee. The financial position of the hospital was not satisfactory and therefore it has been provincialised since 1st April, 1947 and is now known as the Giridih Subdivisional Hospital. An X-Ray apparatus was installed in this hospital in 1955.

(3) *Kasmar Provincialised Dispensary.*

This is a newly opened dispensary in Peterbar thana. It has been functioning since 1st June, 1952.

Chatra Subdivisional Hospital.

The Subdivisional hospital at Chatra was provincialised in 1956.

STATE SPECIAL HOSPITALS.

There are four such hospitals in Hazaribagh town :—

- (1) Police Hospital, (2) P. T. C. Hospital, (3) Reformatory School Hospital and (4) Jail Hospital.

The former two hospitals are financed by the Police Department, the last but one by the Education Department and the last by the Jail Department.

DISTRICT BOARD DISPENSARIES.

Twenty-two dispensaries are maintained by the District Board, viz., (1) Barhi in Barhi P.-S., (2) Saraiya in Bagodar P.-S., (3) Gola in Gola P.-S., (4) Gomiya in Gomiya P.-S., (5) Mandoo in Mandoo P.-S., (6) Bishungarh in Bagodar P.-S., (7) Barahkatha in Barhi P.-S., (8) Barkagaon in Barkagaon P.-S., (9) Tandwa in Barkagaon P.-S., (10) Markacho in Jainagar P.-S., (11) Dumri in Dumri P.-S., (12) Palganj in Pirtand P.-S., (13) Mirzaganj in Jamuan P.-S., (14) Dhanwar in Dhanwar P.-S., (15) Tuladih in Hirni P.-S., (16) Satgawan in Satgawan P.-S., (17) Chauparan in Chauparan P.-S., (18) Simaria in Simaria P.-S., (19) Pratappur in Pratppur P.-S., (20) Hunterganj in Hunterganj P.-S., (21) Gidhaur in Chatra P.-S. and (22) Ghoranji in Deori P.-S. Only two dispensaries, i.e., Barhi and Saraiya have indoor accommodation and the other dispensaries except Ghoranji have four casualty beds for emergency cases. The total expenditure incurred by the District Board on rural medical relief from 1948-49 to 1952-53 is given below :—

1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Rs.	Rs.	Rs.	Rs.	Rs.
98,486	1,10,320	1,32,028	1,30,794	1,57,247

MISSION HOSPITALS.

There are six Mission Hospitals in this district, viz., (1) St. Columba's Zenana Hospital, (2) Chittarpur Hospital, (3) Sitagarha Hospital, (4) Pachamba Hospital, (5) Tisri Hospital and (6) Catholic Ashram dispensary. Out of these three were under the Dublin University Mission and two under the United Free Church of Scotland Mission.

(1) *St. Columba's Zenana Hospital.*

This hospital is a well-equipped female hospital. The present accommodation of this hospital is 126 beds.

There are also ten beds in the post-delivery ward. The hospital has been Nurses' Training School for B-Grade Nurses since 1921 and since 1942 a training for midwifery pupils has been established here.

(2) *Chittarpur Hospital.*

Until 1951 there was a resident European Sister and a trained Indian nurse. A doctor from the St. Columba's Zenana Hospital used to visit this dispensary one day in a week but this has been stopped due to shortage of doctors and the hospital has been closed. There is a proposal for opening a regular dispensary at Chittarpur.

(3) *Sitagarha Hospital.*

This dispensary is visited once a week by the doctor and staff of the St. Columba's Zenana Hospital and the patients requiring hospitalisation are brought to Hazaribagh in a hospital truck.

(4) *Pachamba Hospital and (5) Tisri Hospital.*

Long before the United Free Church of Scotland had opened two Mission Hospitals, viz., one at Pachamba and the other at Tisri, which were in charge of European Medical Missionaries. Pachamba Hospital was famous for eye operation but the importance of this hospital has declined.

(6) *Catholic Ashram Dispensary.*

There is also a Catholic Ashram Dispensary at Hazaribagh which was established in the year 1952. This dispensary is called Holy Cross Institute, Hazaribagh. This has its own building. The average number of daily patients is 30 to 40.

OTHER HOSPITALS AND DISPENSARIES.

Kodarma Hospital.

This hospital is under a Managing Committee. It is run on subscriptions and donations and Government grants.

Ramgarh Cantonment Dispensary.

Formerly this dispensary was under Ramgarh Raj but it has now been transferred to the Cantonment Board, Ramgarh.

Colliery Dispensaries.

There are seven Colliery Dispensaries in this district, viz., (1) Bokaro, (2) Lancaster, (3) Swang, (4) Argada, (5) Kargali, (6) Jarangdih and (7) Bhurkunda.

All these dispensaries are in charge of qualified doctors.

Railway Hospitals.

There are three Railway Hospitals in this district, viz., (1) Giridih Railway Hospital, (2) Gajhandi Railway Hospital and (3) Barkakana Railway Hospital.

HOSPITALS UNDER MICA MINES WELFARE ORGANISATION.

There are three dispensaries, viz., at Dhab, at Dhorakola and at Ganpathagi which are functioning under the Mica Mines Welfare Department in this district. There are also two mobile medical units, viz., one at Kodarma and another at Dhorakola under the same Department.

DISPENSARIES UNDER DAMODAR VALLEY CORPORATION.

The following hospitals are functioning under the Damodar Valley Corporation in this district :—

(a) Tilaiya, (b) Konar, (c) Bokaro.

Bokaro Hospital has 12 beds. With the expansion of the township of Bokaro this hospital is bound to grow into importance.

ICHAK DISPENSARY.

Formerly it was under the Ramgarh Raj but after the abolition of zamindari it was transferred to the Board of Trustees of the Religious Charitable Trust. The dispensary has now been closed. But the Government have opened a new thana dispensary at Ichak which is functioning since July, 1955.

The following is a list of the hospitals and dispensaries in the district :—

APPENDIX.

*List of Hospitals and Dispensaries working during the year, 1955
in the District of Hazaribagh.*

Serial Names of Hospitals and Dispensaries.
no.

1. Sadar Hospital, Hazaribagh.
2. Giridih Subdivisional Hospital.
3. Kodarma Hospital.
4. Chatra Subdivisional Hospital.
5. St. Columbus Zenana Hospital.
6. Police Hospital, Hazaribagh.
7. Police Training College Hospital.
8. Reformatory School Hospital.
9. Ramgarh Dispensary.
10. Kasmar State Dispensary.
11. Bengabad State Dispensary.
12. Gandey State Dispensary.
13. Ichak State Dispensary.
14. Jaridih State Dispensary.
15. Nawadih State Dispensary.
16. Gawan State Dispensary.
17. Tuladih Dispensary.
18. Markacho Dispensary.
19. Palganj Dispensary.
20. Barkagaon Dispensary.
21. Dumri Dispensary.
22. Pratappur Dispensary.
23. Tandwa Dispensary.
24. Gola Dispensary.
25. Huterganj Dispensary.
26. Chouparan Dispensary.
27. Satgawan Dispensary.
28. Gidhour Dispensary.
29. Mandoo Dispensary.
30. Barkatha Dispensary.
31. Gomia Dispensary.
32. Mirjaganj Dispensary.
33. Barhi Dispensary.
34. Saraiya Dispensary.

Serial Names of Hospitals and Dispensaries.
no.

35. Dhanwar Dispensary.
36. Katkamsandi Dispensary.
37. Lawalong Dispensary.
38. Pirtand Dispensary.
39. Buzurgnano Dispensary.
40. Jori Dispensary.
41. Kunda Dispensary.
42. Kanhachati Dispensary.
43. Khairachatter Dispensary.
44. Luncaster Colliery Hospital.
45. Bhurkunda Colliery Hospital.
46. Argada Colliery Hospital.
47. Kargali Colliery Hospital.
48. E. I. R. and B. N. R. Joint Colliery Hospital, Bokaro.
49. Swang Colliery Hospital.
50. Jarandih Colliery Hospital.
51. Telaiya Dispensary.
52. Konar Dispensary.
53. Bokaro Dispensary.
54. Dhab Dispensary.
55. Dhorakola Dispensary.
56. Bendro Dispensary.
57. Mobile Medical Unit, Dhorakola.
58. Pachamba Mission Hospital.
59. Tisri Mission Hospital.
60. Padma Dispensary.
61. Holy Cross Dispensary.
62. Kodarma Holy Hospital.
63. Mobile Unit No. I, Karma.

CHAPTER VIII.

INDUSTRIES.

The main occupation of the people of Hazaribagh is cultivation but industries in the district are growing in importance and absorb a large number of the people. There are rich mineral deposits in the district. Mica and coal are the two most important minerals found in abundance. The Damodar Valley Corporation, a multi-purpose project, has made power available in certain areas at a cheap rate. This will ultimately lead to the rapid industrialisation of the district. Besides working in the mining areas some of the other main occupations of the people are in connexion with timber, firewood and *biri* leaves. The population of the district depending on agriculture is 1,70,076 out of the total population of the district of 19,37, 210 souls according to 1951 Census. A fair percentage of this population depends on mica, coal, timber and other industries.

Among the other important industries mention could be made of limestone, lac and shellac. saw mills and glass factory at Bhurkunda and another small glass factory near Ramgarh. There is no big engineering works of importance except a few repair shops owned by mica and coal mines' owners. A thermal power station has been opened at Bokaro and a dam and power station have been constructed at Tilaiya in the district. Further, on the proposal of Messrs. Imperial Chemical Industries, Ltd., the Government of India and the State Government of Bihar have come to an agreement with the former to construct an explosives factory at Gomia. The construction of the factory building has been taken in hand. The hilly area of Gomia which is of little importance now is soon going to be an important factory town.

MICA.

The most important industries in the Hazaribagh district are mica mining and mica splitting. India is the biggest producer that supplies about 80 per cent of the world requirement of mica, the other producing countries being Brazil, Canada, Madagaskar, Argentina, Ceylon, Africa, Russia and China. Of all the production in India the contribution from Bihar is about 60 per cent and almost the entire quantity of it comes from Hazaribagh.

Bihar mica used to be shipped as "Bengal mica" which had an enviable reputation for its beautiful ruby and green colours. Previously the chief use of mica was for domestic purposes and mica sheets were used in place of glass panes for the purpose of decorating and cooling the houses.

With the commencement of the first World War (1914—1918) its importance as a strategic material was realised and the scientific world made a heavy demand on Indian resources. During the Second World War commencing from 1939 the United States of America and the United Kingdom sent a Joint Mica Mission to purchase mica from India for stock piling, which gave a great impetus to this industry.

Its remarkable insulating property makes mica invaluable to the electrical industry. It is used for commutator insulation, armature insulation, transformers, electric heaters, condensers, radio tubes, fuse boxes, lamp sockets, sparking plugs, washers, etc. Mica is also used in making components of aeroplanes, pyrometers, lamp chimneys, stoves, ovens, window and door screens. Mica powder is used in the manufacture of points in lagging boilers, iron safes, house roofs, and axle greases. Small thin films or splittings cemented together are built up into sheets and sold as micanite. Ground mica made from waste is used in the manufacture of patent roofings, wall paper, automobile tyres, moulder and insulators and as a filler in rubber goods. As most of these are not manufactured in India mica is hardly consumed in India.

Bihar, Rajasthan, Madras and Travancore-Cochin are the main suppliers of mica in India. The Bihar mica belt extends over an area of about 1,500 square miles from Gaya district in the west across Hazaribagh and Monghyr districts into Bhagalpur district in the east. Mica has also been located in the past in some other areas.

The mica mined in the Hazaribagh district is of various colours such as green, brown, white, silver and ruby. The most valuable is that known as ruby and the mica belt of the district mostly contains this type of mica. After the crude mica from the mines has been cut and flaws removed, it is known as block mica, the thickness of which may come down to 0.008 inch.

Block mica is sorted according to size and quality. Defects consist of cracks, stains, and other inclusions. At times such defects are eliminated by further splitting and cutting and thus improving the quality of the final block. But there is obviously an economic limit beyond which it is not advisable to follow this process. For use in condenser plates the mica must be very level and free from warping and stains. Various qualities are described as superfine, clear, slightly stained, fairly stained, good stained, heavy stained, badly stained, densely stained, and black spotted. Unfortunately these qualities are not standardised. Different sorters and firms have their own interpretation of the qualities. Competition in selling also gives rise to variation in quality. On the whole, however, there is approximately an average local standard which might be referred to as "Bazar Standard".

If on this " Bazar Standard ", fair stained and better mica is regarded as high quality and the rest as low quality, the proportion of high and low qualities of mica produced in Hazaribagh district is approximately 1:10.

The main processes in mica factories may be broadly classified as follows :—

- (1) rifting of crude mica for sickle cutters,
- (2) cutting of rifted mica by sickle cutters,
- (3) knife dressing,
- (4) sortage of mica into different sizes,
- (5) finishing of sized mica according to qualities,
- (6) splitting into condenser films,
- (7) making book form splittings,
- (8) making loose splitting, and
- (9) packing.

It is remarkable that all the above processes are done by hand only and the instruments used are ordinary sickles, knives and scissors.

The following figures will show the comparative position of mica trade of India from 1948 to 1953 :—

Year.	Quantity of mica shipped from all ports in cwt.		Value. Rs.
1948	..	2,95,818	5,15,78,594
1949	..	2,83,935	6,75,08,476
1950	..	4,16,866	10,28,80,255
1951	..	5,02,354	13,52,67,701
1952	..	3,26,556	9,22,72,880
1953	..	8,27,806	8,38,82,375

Bihar mica is mainly exported from Calcutta port. But some block mica from Rajputana also comes to Bihar factories which is exported from Calcutta. The export figures of Calcutta port during 1953 was 1,92,059 cwt. valued at Rs. 6,88,04,891 as against 2,05,241 cwt. valued at Rs. 7,28,75,881 during 1952.

Marketing of Indian mica entirely depends on the demand from foreign countries. If for any reason the foreigners recede from buying, India has to wait patiently for fresh demands. Mica market in India

may therefore be called a " Buyers' Market ". The supply and demand of mica is closely linked with the international political situation of the world and with the apprehension of war or some far-reaching policy or programme for stock-piling and conservation. When stock-piling is completed the demand decreases. The mica industry is facing a crisis in 1956. There is increasingly more pressure of competition from other countries. Another threat to this industry is the manufacture of " samica " mica in commercial scale out of scrap mica. The Mica Advisory Committee has, therefore, recommended ban on the export of waste and scrap mica. Ultimately India has to develop mica consuming industries within the country if the mica industry has to be stabilised.

Mica industry in Hazaribagh has certain remarkable features. In spite of the large number of people engaged in this industry and the large output, the industry could still be called a cottage industry so far splitting of mica is concerned. After the mica is extracted from mines crude crystals or books of mica are brought to the owner's factory godowns in sealed bags under Mica Pass, as required by the Bihar Mica Act and then processed in the factory by hand power only. No mechanical process has yet been introduced for this work. The processing of mica is very simple and depends entirely on the workers' individual skill and visual test and no physical strength is required. No mechanical test is done and the quality of the output may naturally differ from one worker to another.

The reputation of Bihar mica has had a considerable set back. In the rush for supply to assure the stock-piling abroad in the recent years there was not much check on the quality of the product. The dealers did not keep the contract for supplying good quality product and this " Mica Piracy " as it is locally called coupled with the fact that other countries are now in the market has heavily affected the mica industry. The foreign industrialists could not be much blamed for their shyness to consume Indian mica or substituting it for synthetic mica. To check this tendency the State Government had passed the Bihar Mica Act which provides for licensing every miner and dealer of mica.

There are now about 123 registered mica factories at Giridih and 57 at Jhumri Tilaiya. Most of the mica factories are situated at Jhumri Tilaiya, Domchanch, Pachamba and Giridih. Many of the factory owners are also shippers. About 40,000 persons are engaged in this industry. There were 195 mining license and 1,403 dealers' license-holders in Hazaribagh district during 1953-54. The chart indicating the trend of mica trade of India from 1948-53 quoted before will show that the price of mica is not always dependent on the quality exported. The figures show that the ratio between the quantity and the value kept

rising from year to year upto 1951 but was not constant in the later years. The difference in value may be attributed partly to the devaluation of currency since the latter half of 1949 and partly to the rise in prices. Correspondingly the cost of production became higher due to soaring prices of consumer goods and rise in wages.

COAL.

Coal-mining is also one of the major industries of the district of Hazaribagh. The important coal-fields in the district are Bokaro, Ramgarh, South Karanpura, North Karanpura (partly in the Palamau district), Itkhori, Chope and Giridih.

Bokaro coal-fields form a long narrow strip of Gondwanas mainly along the valley of Bokaro river between longitudes $85^{\circ} 25'$ and $80^{\circ} 65'$. The eastern edge of the fields is only two miles west of Talchers extending west from the Chandanpura coal-fields. This field is divided into two parts: East Bokaro and West Bokaro. Mining has been concentrated on East Bokaro and almost entirely restricted to the Kargali seams. Other seams occur also in East Bokaro the most important being the Kargali seam, Bermo seam, and Karo seam. The West Bokaro seams appear to be more distributed and unattractive.

Ramgarh coal-fields extend along the valley of the Damodar river covering an area of about 40 square miles. It is generally estimated that five million tons of workable coal is available over an area of one square mile.

South Karanpura fields cover an area of about 75 square miles between longitudes $85^{\circ} 09'$ and $85^{\circ} 30'$. Since the opening of Barkakana-Daltonganj Section of the East Indian Railway (now Eastern Railway) the production from this field has increased enormously. The seams of this field can be favourably compared with the seams of the Jharia coal-fields. Reserves of coal in this field is at least 780 million tons. Most of the coal is being mined from large open quarries.

North Karanpura fields occupy an area of about 550 square miles between longitudes, $84^{\circ} 41'$ and $85^{\circ} 28'$. This field has not been surveyed in detail but large number of seams are known to occur, some over 72 feet thick of first class quality. It is estimated roughly to contain about 8,750 million tons of coal of which 5,000 million tons are of good quality.

Itkhori and Chope coal-fields form small areas.

Giridih coal-fields are more important fields consisting of three seams. It is generally worked by the Railway.

Approximately 33,857 persons were on an average engaged daily in coal-mining in 1954 in some shape or other. This number includes both local inhabitants within the district as well as imported labour. Most of the imported labour is from the adjoining districts excepting the skilled workers.

The following figures supplied by the Chief Inspector of Mines in India, Dhanbad, will show the comparative position of coal trade within the district of Hazaribagh from 1948 to 1954 :—

Year.	Quantity of coal extracted.		Value.
	Tons.		Rs.
1948	.. 33,53,219	..	4,90,31,534
1949	.. 34,93,772	..	5,10,13,157
1950	.. 30,77,207	..	4,26,97,219
1951	.. 35,68,378	..	5,01,97,505
1952	.. 39,40,147	..	5,56,88,747
1953	.. 39,89,389	..	5,67,87,048
1954	.. 38,97,269	..	5,51,40,541

LIMESTONE.

Another important industry of the district is limestone mining. A large quantity of limestone is burnt annually for use in the building trade as lime for mortar and plaster. Limestone is required also by the iron and steel industry and in the manufacture of glass and chemicals. It forms the main ingredient of cement. There are three main areas where limestone is found in the Hazaribagh district, viz., Bundu-Basaria, Kurkuta-Religara and Laping Bhurkunda-Kursa.

Approximately the following quantities of limestone have been mined from 1948 to 1954 from Bundu mine which is the most important mine of limestone in the district :—

Year.	Quantity.			Value.
		Tons.		Rs.
1948	..	3,635	..	22,686
1949	..	7,590	..	46,501
1950	..	4,551	..	32,710
1951	..	7,442	..	52,094
1952	..	2,799	..	19,593
1953	..	1,601	..	11,207
1954	..	4,039	..	28,273

LAC AND SHELLAC.

Another important industry is the cultivation of lac. Lac is extensively grown in the Chatra subdivision and Gola area of Sadar subdivision. Small shellac manufacturers are working in the Chatra subdivision and Gola police-station of the Sadar subdivision.

Hazaribagh district had a much more flourishing lac business some years before. Chatra was the main centre for lac business. The old records going more than a century back speak of the thriving lac business in Chatra. The reasons for the decline of the lac business are not peculiar to this district only but are common to the other lac growing districts of Manbhum, Ranchi and Palamau. Mainly there is no large market for the consumption of lac within India and the industry depends on the trends in the world market. Here also other competitors and chemicals had a considerable effect on the decline of the industry.

FOREST PRODUCTS.

Hazaribagh district is rich in forests. Valuable timber and other forest raw materials are available from these jungles. A large number of saw mills are running at Ramgarh, Hazaribagh and other places in the district. With the availability of cheaper power from Damodar Valley Corporation this industry along with a number of such other industries are likely to thrive. *Khair* (catechu) trees are abundantly found in the Chatra Forest Division. The manufacture of catechu is carried on during the winter season. The catechu (locally known as *katha*) is generally manufactured in the jungles and finished products are brought down to Chatra market for disposal. This industry has, however, declined to some extent in recent years. Catechu is required for tanning. A small quantity is used with betel leaves (*pan*). *Biri* leaves are also abundantly found in the Hazaribagh jungles. *Biri* leaves are collected and the bulk of it is sent to Chakradharpur in Singhbhum district and other places for preparation of *biris*. Quite a good number of people could be said to be engaged in *biri* industry. *Biri* provides cheap smoke for the poorer classes. The tobacco for *biris* is imported from other parts of India.

OTHER INDUSTRIES.

Among the other industries, the newly started glass factory of Bhurkunda is a branch of the Sodepur Glass Works near Calcutta. This factory is well equipped with up-to-date machineries for the manufacture of sheet glass. The production is expected to start soon. There is another glass factory near Ramgarh named Anand Glass Works. It is engaged in the manufacture of hollow glasses such as tumblers, chimneys, jars, etc., but in small quantities.

COTTAGE AND VILLAGE INDUSTRIES.

Hazaribagh district is ideal for the development of cottage industries. Raw materials are abundantly found. Cheap power is now readily available because of the Damodar Valley Corporation. There is no dearth of labour.

A number of cottage industries based on agricultural and forest raw materials and to a certain extent on mineral resources have been in existence since a long time. Such industries are : oil *ghanies*, rice-husking, village pottery, blacksmithy, carpentry, handloom-weaving, cutlery-making, wood-sawing, furniture-making, toy-making, charcoal-burning, crude tanning and leather goods-making, etc. Cocoon is reared at a few places. *Tasar* is woven in Gomia area.

WEAVING.

Cotton weaving according to indigenous handloom methods exists practically in all parts of the district. The products turned out by the weavers include bed covers, bed sheets, *sarees*, curtains, *darees*, *lungis*, etc. The *sarees* made for the use of Adibasi women are of special designs and are very artistically woven in the Gola, Gomia and Peterbar thanas of the district. The market for the products is generally local, but a small percentage of it is also sent outside. Cotton-yarn-dyeing is also carried on by the people with indigenous vegetable colours which are available in plenty in the district.

BRASS AND BELL METAL.

Brass and bell-metal industries are carried on throughout the district. But the villages of Anchajam, Bishungarh, Keriampur, Ichak, Bajubar and Chatra are the main centres. Usually the utensils in popular demand in the average family are manufactured. The present condition of the workers is not satisfactory. Their crafts are lacking in shape, design and finish. The technique of production has to be modernised and new designs and patterns introduced to make the manufacture economical and to increase the marketability of the goods.

CUTLERY.

This industry is being carried on at Vendra (in Nawadih police-station), Chitarpur (in Ramgarh police-station), Ichak, Barkagaon and Giridih. Among these places, Vendra is by far the most important centre where a wide range of carpenters' tools, cutlery, tea garden implements, locks, sticks, etc., are manufactured with the help of power. There are more than 300 blacksmiths at Vendra alone engaged in this industry. The quality of goods manufactured is fairly good. The cutlery goods produced at Vendra are mostly sent to Calcutta.

MINOR COTTAGE INDUSTRIES.

There is a large number of minor cottage and village industries in existence in the district of Hazaribagh. These include sericulture, wool-weaving, spinning, knitting, blacksmithy, goldsmithy, stone-carving, wood-work, toy-making, mat-making, bamboo-basket-making, potteries, tiles and bricks-making, oil *ghanies*, lime-making, charcoal-burning, etc. No particular area of the district is specialised in any of these industries. They are found scattered throughout the district.

There has been no systematic economic survey of the district. But the Damodar Valley Corporation had collected certain data of small industries in some villages. Figures collected by them show that in Nawadih there are over 433 weavers, 277 blacksmiths, 301 oil-pressers, 74 cobblers, 47 carpenters, 39 goldsmiths, 2 rope-makers, 5 brass and bell-metal workers and 513 potters. At Ichak there are 17 oil-pressers, 69 goldsmiths, 26 potters, 10 blacksmiths, 1 lac-worker, 3 stone-workers and 49 bamboo-workers. Near Ichak there is a village Karistpur where there are 63 brass and bell-metal-workers. In Bagodar police-station at the village of Bishungarh there are more than 100 brass and bell-metal-workers, 40 shellac-workers, 68 goldsmiths, 5 blacksmiths, 177 oil-pressers, 42 carpenters, 12 leather-workers and 10 potters. In the same thana at village Anchajam 78 persons are engaged in carpentry, 13 in leather-work, 13 in blacksmithy, 23 in brass, 14 in goldsmithy, 36 in bamboo-work and 36 in stone-work.

These figures suggest that such industries are well distributed in the villages and that there is a great scope for their progress.

CHAPTER IX.

MEANS OF COMMUNICATION.

The district of Hazaribagh has a network of good roads now. This is so because of the important mica mines and collieries, forests, and a number of important trade centres and townships. Like the rest of Chotanagpur the district has favourable conditions for building good roads. The natural slopes of the plateau are very congenial to drainage and road-building materials are very easy to obtain. It is only natural that Hazaribagh should have some of the best roads in India.

ROADS IN THE EIGHTEENTH CENTURY.

The earliest maps of the district were published in England in 1779 by Major James Rennell, the first Surveyor General of India. The scale used in these maps is small and probably the roads shown therein were of military importance. The material regarding the maps was collected before Rennell left India and in view of the long time that was taken in communication between England and India the materials regarding the changes that had occurred after he left were not included in these maps. In spite of their shortcomings these maps are a fairly reliable source of our knowledge regarding communication in this district in the latter half of the eighteenth century.

According to Rennell's map no. IX which is a congregated map of Bengal and Bihar, there appears to have been only four roads in Hazaribagh. They were as follows :—

- (1) The road from Patna to Dosainagar, passed through Gaya and Sherghati. It entered Hazaribagh by the Lilajan valley and climbed up to Jori Ghat to Chatra, whence it proceeded through Jabro to Tori in Palamau. From Tori to Jabra its course probably coincided with the present Balumath-Sherghati road.
- (2) The road from Bihar to Nawada led ultimately to Bishunpur and Calcutta. It entered Hazaribagh by the Sakri valley, passed through thana Gawan and reached the plateau north of Kharagdiha whence it proceeded south-east to Sirampur and Tundi. It corresponds with the present roads from Satgawan to Giridih and Giridih to Tundi, except for slight modern diversion.
- (3) Another road is shown as leading from Nawada to Ramgarh and south through Chutia (Ranchi) to Dosainagar. The road was probably not so well known to the British as the map is strikingly inaccurate between Kodarma and Ichak

and south of the Chutupalu pass, it traverses an avowedly unsurveyed country. Moreover, even in 1837, it had no place in the district list of roads. It entered Hazaribagh by the pass between Rajauli and Kodarma.

- (4) A cross road runs from Ramgarh through Gola and Peterbar leaving the district beyond Kasmar to join the Calcutta-Bishunpur road through Raghunathpur. It corresponds closely with the existing road.

Map no. VIII inscribed to Major Jacob Camac is entitled "the conquered provinces on the south of Bihar containing Ramgarh, Palamau, Chotanagpur and their dependencies." It excluded Kharagdiha which was at that time more accessible to the military from the side of Monghyr. A large number of roads are shown in the map but many of them were obviously mere tracks. For example, no less than seven routes radiate from Kunda which even now is connected by a route of secondary importance traversing from Imamganj in Gaya to Lawlang in Hazaribagh.

From Rennell's no. VIII map it appears that—(1) There was no road at all along the country now served by the Grand Trunk Road. There is a great square of jungle country corresponding to the present thanas of Mandu, Bagodar, Gumia and police-station Nawada of thana Dumri, which has no roads at all except one track from Ichak to Mokamo south of Bharlatta, and thence to Baraganda where the copper mines were situated.

(2) Hazaribagh appears as Ocunhazari near to Mukundganj on the Barhi-Ramgarh road.

(3) The road centre of Chauparan was then a mile to the south-west at Bigha, from which place one could go north through the Champa pass to the Gaya plain, or west through Itkhori to Kendi, or south-west to Ichak to what is known now as Padma or east through Rampur to Gumo. From Itkhori, which has ruins of a Hindu temple, one could go north by the "Donoh" pass to meet the other road down the Champa pass.

(4) Gumo was another important centre. From here routes run to Rajauli in the north, to Ramgarh in the south, to Kodarma and Domchanch in the north-east and to Jainagar and Markacho in the south-east. The Gumo-Markacho road proceeded to Kharagdiha and passed through Birni, Bharkatta and Leda to Palmo and to Sirampore. From Palmo the route led across Barakar to Palganj.

(5) A circuitous route existed from Palganj to Baraganda, where the copper mines were situated. Now that the mines are unworked it has disappeared from the modern maps.

(6) Another road from Palganj passed south to Nawagarh, traversing the difficult spurs of Parasnath and went south to Jaipur in Manbhum. From Nawagarh, a traveller could proceed first to Palganj and thence to Nawada either by Kharagdiha or by Kodarma or Rajauli. This is interesting in the light of the theory put forth by Mr. Beglar in Volume VIII of *Archaeological Survey of India Reports* that in early times a road ran from Patna across Hazaribagh to Tamluk or Tamralipti of old in Bengal. According to Mr. Beglar it would cross the Barakar close to Palganj and the range of hills near Rajauli. He maintained that it was a great thoroughfare and large cities sprang up along its route. The archaeological records, however, contain no further reference to ruins of archaeological interest at Palganj or at any place intermediate between Palganj and Rajauli.

RENNELL'S MAP NO. II.

The third of Rennell's map on the same scale as in no. VIII included Kharagdiha and shows "The Jungleterry District..... comprehending the countries situated between Moorshedabad and Behar". Kharagdiha is shown as a part of Monghyr, the boundary between being indicated by a dotted line with "Sarhaut" to the east and "Ghidore" to the north-east. The additional roads shown in this map are from Kharagdiha to Gidhaur which branch to the east of Chakai, a second from Sirampore directly to Chakai, another to Deoghlar. The Gumo-Domchanch road was continued to "Khesmi" and "Tarandaka" (probably Doranda) east of which it joined the main road north of Kharagdiha to Nawada.

ROADS IN 1837.

From a report submitted in 1837 it appears that the roads of the district were then as follows:—

A. First Class roads.

- (1) Sherghati-Hunterganj-Jori-Chatra.
- (2) Chatra-Senduari-Katkamsanri-Hazaribagh.
- (3) Chatra-Habra-Lohardaga.
- (4) Hazaribagh-Chandauri-Balia-Jainagar-Kishenpur
(i.e., Ranchi).
- (5) Bishungarh-Jharpo-Ichak.

- (6) Gobindpur-Nasirganj-Manjhne-Gawan-Goranji to Baidyanath (Deoghar).
- (7) Kharagdiha to Chakai and Bhagalpur.
- (8) Kharagdiha-Sirampur-Palganj-Manbhum district.
- (9) Chatra-Gumia-Chitarpur-Gola-Kasmar-“Rugoah”-Jhalda.

B. Third Class roads.

- (10) Chatra-Kanha-Chatti-Dehipur-Danua.
- (11) Chauparan-Pathra-Padma-Ichak-Hazaribagh.
- (12) Hazaribagh-Indra-Jabra-Ramgarh-Chitarpur-Gola-Nawadih-Silli.
- (13) Hazaribagh to Chatra.
- (14) Kharagdiha, south-west to Bishungarh and Chatra.

In the above list no. (4) is the military road through Badam and Pithauria between Hazaribagh and Ranchi, now abandoned, no. (6) is the Nawada-Deoghar Pilgrim road. Chatra was a police thana on the old military road, about 23 miles east of Hazaribagh.

THE OLD BENARES ROAD.

A new road had been constructed for improving military communications with the United Provinces (Uttar Pradesh) shortly after the entry of the British into Hazaribagh. Along this road semaphore towers which are still to be seen in ruins were placed at suitable intervals. This road was not metalled and with the construction of the Grand Trunk Road it ceased to be of military importance. From the existing semaphore towers it could be made out that this old Benares road ran from the west of Chas in Manbhum and passed through Angwali, Gumia, Chatro, Hazaribagh, Katkamsanri and Kanhachatti near Kendi, and down the Dhangain pass into Gaya. The construction of the road was commenced in 1782 and its usefulness ended with the opening of the Grand Trunk Road which was completed in Hazaribagh district in 1838. It enters the district at the 193rd mile about 10 miles east of Dumri and leaves it at the foot of Danua Ghat by the Guari river at the 268th milestone.

THE GRAND TRUNK ROAD.

When the Grand Trunk Road was completed it was metalled and planted with road-side trees and had Dak Bungalows and Rest Houses at frequent intervals. The bridge at Barkatta was being completed in 1843 when Dr. Hooker visited Parasnath.

Within a few years of its completion the Grand Trunk Road came to serve a great military purpose. It was the main artery through which military movement took place from Calcutta side to the north. There were camping grounds by the side of the Grand Trunk Road at intervals where the military could rest. Burhee and Bagodar on the Grand Trunk Road came to be of special importance during the Santhal movement in Hazaribagh district in 1855 and 1856 and after that in the Mutiny of 1857. There used to be a Magistrate posted at Burhee who was in charge of several thanas and held his court at Burhee. Bullock-cart trains used to run on the Grand Trunk Road and protection was given to the bullock-cart trains by a company of armed sowars. During the peak period of the movement in 1857 when Hazaribagh and Ranchi were deserted by the British the British Government for some time ran from Bagodar. It was again from Bagodar that military detachments were sent out to retake Hazaribagh and Ranchi. The number of graveyards on the Grand Trunk Road containing graves of the military personnel recall the route marches and movements of the military in the nineteenth century.

Regarding the Grand Trunk Road in the last District Gazetteer of Hazaribagh published in 1917 it was mentioned that " its importance has naturally decreased since the construction successively of the East Indian Railway main (loop) line, the Chord line and finally the almost parallel Grand Chord line. It is, however, used in the cold weather for the passage of troops, who usually halt, at Dumri, Bagodar, Barahkatha, Barhi and Chauparan, where spacious camping grounds are maintained for their use ". These remarks however do not apply any longer. Grand Trunk Road now within Hazaribagh district in common with the other portions of the Grand Trunk Road in other districts offer a first class tar-macadamised road through which hundreds of motor vehicles carrying passengers and goods pass daily. The enormous development of motor transport has brought the Grand Trunk Road again into great prominence. Truck-loads of various types of merchandise including potatoes from Bihar Sharif, and coal and mica from Hazaribagh and Ranchi districts pass through Grand Trunk Road on the way to Calcutta.

PRESENT DAY ROADS.

In the district of Hazaribagh roads are now maintained by several agencies. The agencies are :—

- (a) National Highways maintained by the Central Public Works Department.
- (b) Provincial Highways maintained by the State Public Works Department.

- (c) Roads maintained by the District Board.
- (d) Roads maintained by the Damodar Valley Corporation.
- (e) Roads maintained by the Municipalities.
- (f) Roads maintained by the Hazaribagh Mines Board.
- (g) Roads maintained by the Forest Department.
- (h) Roads maintained by the Union Boards (now being taken over by the Gram Panchayats).

NATIONAL HIGHWAYS.

The following roads are classified as the National Highways out of which the Giridih-Dumri road has the status of a temporary National Highway :—

Name.	Mileage.
(1) Burhi-Hazaribagh Road ...	22.50
(2) Grand Trunk Road ...	75.00
(3) Burhi-Rajauli Road ...	31.10
(4) Dumri-Giridih Road ...	26.30

Thus the total mileage of National Highways in the Hazaribagh district is 154.90.

Of the above roads the Grand Trunk Road now forms National Highway no. 2 and the Burhi-Hazaribagh road which proceeds to Ramgarh and Ranchi is a part of National Highway no. 33. The Burhi-Rajauli road is a part of National Highway no. 31.

A permanent reinforced cement concrete bridge has been constructed at a total cost of Rs. 29.62 lakhs over the Barakar river near Burhi in the 250th mile of the Grand Trunk Road. The main bridge is 607'-0" long between the abutment faces. There are 11 shore spans of segmental arches with 46'-0" clear spans. The old bridge had collapsed in the floods of 1946. The new bridge was completed and thrown open in 1951.

The Dumri-Giridih road which proceeds to Jamua, Kharagdiha, Chatra and Sarawan is 63.5 miles in length. Only 26.30 miles of it are being treated as temporary national highways. The whole road forms a portion of the old Assam Access Road connecting the National Highway no. 2 and National Highway no. 31 north of the Ganga.

PROVINCIAL HIGHWAYS.

The following roads have the status of Provincial Highway :—

Name	Mileage.
(1) Hazaribagh-Ranchi Road (up to the border of the district).	38.60
(2) Hazaribagh-Bagodar-Saraiya Road ...	40.50
(3) Giridih-Jamua-Sarawan Road ...	14.5
(4) Jamua-Kodarma Road ...	43.0
(5) Gonia-Chatra-Gosaidih Road ...	42.5
(6) Hazaribagh-Simaria Road ...	36.0
(7) Other roads like Madhuban Branch Road, Parasnath Hill Road, etc.	18.42

233.52

Out of these roads nos. 1, 2 and no. 7 are old Public Works Department roads. The other roads have been provincialised under the States' Development Programme.

The Giridih-Jamua-Sarawan road is the continuation of the temporary National Highway from Dumri to Giridih. From Giridih onwards it has the status of Provincial Highway. An estimate of Rs. 5.70 lakhs for the Giridih-Jamua section and another estimate of Rs. 6.64 lakhs for Jamua-Sarawan section has been approved by the State Government to improve this road and to make it an all-weather road. The road has been completed in the year 1955.

The Jamua-Kodarma road was taken over from the District Board in 1949. The culverts of the road are narrow being only 13 feet wide on the average. Immediate improvement of the road rendering it motorable throughout the year has been approved at an estimated cost of Rs. 1,92,500 and the improvements have nearly been completed.

The Gonia-Chatra-Gosaidih road was taken over from the District Board in October, 1950. It is also known as Dobhi-Chatra-Balumath road. The road starts from near Dobhi in Gaya district and goes up to Balumath in Palamau district. Dobhi is about 8 miles from Gosaidih on the border of Gaya and Hazaribagh districts. Gonia is a river on the border of Palamau and Hazaribagh districts. In Hazaribagh district, therefore, the road runs from Gonia to Gosaidih. When it was taken over, it was all *kutch*a road except in miles 19 and 20 where it passes through Chatra. There was no bridge on the road. Improvement on the road at an approved cost of Rs. 28.75 lakhs is in progress, out of

which approximately Rs. 16.03 would be spent in building culverts. This road connects the districts of Gaya, Hazaribagh and Palamau and also provides a convenient route from Gaya to Ranchi, via Dobhi and Chatra and Chandwa.

The Hazaribagh-Semaria-Ichak road was taken over from the District Board in the year 1952. Improvement to this road at a cost of Rs. 2.34 lakhs from the Central Board Fund has been sanctioned. The Hazaribagh-Semaria section forms a part of the Hazaribagh-Daltonganj road via Semaria and Panki.

The following is a statement showing mileages of and maintenance expenditure on road in Hazaribagh district :—

Name of road.	Mileage.	Maintenance.		Expenditure.	
		1952-53.	1953-54.	1954-55.	1955-56.
ROADS FALLING UNDER PUBLIC WORKS DEPARTMENT, HAZARIBAGH DIVISION,					
A. National Highways.					
		Rs.	Rs.	Rs.	Rs.
1. Grand Trunk Road (N. H. No. 2).	53.00	77,483	2,06,956	88,182	1,61,923
2. Rajauli-Singrawan Road up to Burhi (N. H. No. 31).	27.50	56,097	1,39,116	1,30,996	62,054
3. Burhi-Hazaribagh-Ramgarh road (N. H. No. 33).	49.25	78,458	1,47,372	1,08,175	71,314
4. Jamua-Kharagdiha Chitro-Sarawan Road (Temporary N.H.).	14.50	23,205	30,852	24,940	10,463
B. Old Public Works Department Roads.					
5. Hazaribagh-Bagodar-Saraiya Road.	40.50	51,684	63,271	51,452	1,13,693
6. Lake Road ..	5.00	5,389	7,821	8,775	13,255
C. Roads included in First Five-Year Plan.					
7. Jamua-Kodarma Road (P. H.).	43.00	94,671	75,669	74,069	42,361
8. Gonia-Chatra-Gosaidih (P. H.).	42.00	1,15,343	56,588	1,11,184	1,17,007
9. Jamua-Sarawan Road (Temporary N. H.).	14.50	23,205	30,582	..	..
This is already shown at item 4 above but is included in State's Five-Year Plan to be improved out of State funds. The Public Works Department has taken over this road very recently.					

Name of road.	Mileage.	Maintenance.		Expenditure.	
		1952-53.	1953-54.	1954-55.	1955-56.
		Rs.	Rs.	Rs.	Rs.
10. Hazaribagh-Charwa dam site road.	3.50	..	..	..	6,463
ROADS PROPOSED TO BE IMPROVED IN THE FIRST FIVE-YEAR PLAN OUT OF LOAN OF Rs. 2.75 CRORES FROM GOVERNMENT OF INDIA.					
11. Domchanch-Dhorakhola-Meghatori Road.	13.00	..	..	4,088	834
12. Ramgarh-Gola-Petarbar road up to Manbhum border and link to Jaridih.	46.00	..	..	5,100	26,214
ROADS FINANCED FROM CENTRAL ROAD FUND.					
13. Hazaribagh-Simaribogra Road.	37.75	4,809	30,852	62,503	63,822
ROADS FALLING UNDER PUBLIC WORKS DEPARTMENT, DHANBAD DIVISION.					
<i>A. National Highways.</i>					
14. The Grand Trunk Road No. H 2.	24.00	29,378	38,902	..	1,654
15. Jamua-Giridih Road (Temporary N. H.). This is also included in State's First Five-Year Plan and is being improved out of State funds.	22.00	26,175	22,331	..	42,681
16. Giridih-Dumri Road (Tempy. N. H.).	27.00	30,013	69,712	..	36,946
<i>B. Old Public Works Department Roads.</i>					
17. Madhubani Branch road	2.50	1,767	982	..	2,052
18. Parasnath Hill Road	11.50	5,680	9,553	..	7,566

DISTRICT BOARD ROAD.

The District Board of Hazaribagh maintains 91 miles of metalled and 830 miles of un-metalled roads. Description of some of the more important roads are given below.

(1) *Chatra-Chauparan Road.*—The length of this road is 30 miles and 4 furlongs. It is a metalled road with a tarred surface. There are two big bridges, one at Mohana river and the other at Guli river near Pitiz. This is the shortest route for people from Chatra to reach the railway station at Kodarma.

(2) *Hazaribagh-Semaria-Chatra Road.*—The length of this road is about 42 miles. The first nine miles are tarred and the rest is well gravelled. The whole road is bridged and is negotiable by jeep in the rainy season as well. The section from Semaria to Chatra only is under the District Board while the Hazaribagh-Semaria section has been provincialised.

(3) *Hazaribagh-Katkamsandi-Chatra Road*.—The length of the road is about 35 miles and 4 furlongs. The road from Hazaribagh to Katkamsandi is a fairly good road except for the *ghat* portion of the road in the 12th and the 13th miles.

(4) *Bishungarh-Peterbar Road*.—The total length of the whole road is 31 miles and 4 furlongs, out of which 19 miles from Bishungarh has been handed over to Damodar Valley Corporation which improved a part of it by metalling and tarring. The road from Gonia to Peterbar is *kutchra* and is intersected by rivers. The Damodar Valley Corporation has constructed a bridge on the river Konar near Gonia.

(5) *Hazaribagh-Tandwa-Semaria Road*.—The length of this road is about 45 miles. The road is un-metalled and intersected by several un-bridged rivers. The road is jeepable during the dry season only.

(6) *Ramgarh-Dakagarha Road*.—The length of the road is 28 miles, out of which 15 miles from Ramgarh to Gola are metalled. The rest is un-metalled and is intersected by un-bridged rivers. It starts from Hazaribagh-Ranchi road in mile 31 and ends at the border of Jhaldā in the district of Manbhum.

(7) *Saraiya-Dhanwar Road*.—The road is 18½ miles long, un-metalled and intersected by rivers. It is a feeder road to Hazaribagh Road Station from Dhanwar side.

(8) *Putridih-Govindpur Road*.—This un-metalled road of 37 miles connects Ranchi district at Ormanji with Manbhum district at Chas. This road is intersected by rivers.

(9) *Bogra-Lawalong Road*.—This is a *kutchra* road of 17 miles. It joins Hazaribagh to Palamau district.

(10) *Gaya-Deoghar Road*.—The total length of this road is 95 miles 6 furlongs, out of which 47 miles 5 furlongs fall in Hazaribagh district. 45 miles of this road are maintained by the District Board and rest by the Public Works Department. It passes through Govindpur, Satgawan, Gawan, Khejoori and Deori thereby joining the Santhal Parganas with Gaya district via the district of Hazaribagh.

(11) *Koar-Kodarma Road*.—It starts from the 9th mile at Giridih-Kodarma road and passing through Markacho and Jainagar joins the same road near Kodarma. It is a *kutchra* road and is intersected by rivers.

There are various feeder roads to railway stations. Some of them are Chitterpor main road connecting Ramgarh-Dakagarha Bund with the railway station at Mel on Eastern Railway, Isri feeder road connecting

Grand Trunk Road to Nimia Ghat railway station on Eastern Railway and Parsabad-Khesmi road connecting the Koar-Kodarma road to Parsabad railway station.

Besides these roads there are several village and other roads maintained by the District Board.

FOREST ROADS.

The total mileage of roads maintained by the Forest Department within Hazaribagh district was 330 miles 21 chains till 1956. This does not include the extraction paths. Some of the roads were handed over by the District Board to the Forest Department and some were constructed by the Department.

The condition of the roads in the forest areas is not good. Most of the forests of Hazaribagh district were the private property of the zamindars who did not maintain the roads properly as they did not think it necessary that the adjoining forests belonging to different zamindars should be inter-connected. Since the management of the forest was taken over by the State some improvement has been done.

ROADS MAINTAINED BY THE HAZARIBAGH MINES BOARD.

The total length of the roads maintained by the Hazaribagh Mines Board is nearly 66 miles 5 furlongs, out of which 54 miles and 2 furlongs are metalled roads and the rest are gravelled.

The Dumri-Nawadih road is 12 miles in length. It starts from 203rd mile of the Grand Trunk Road and connects four important State collieries of Bermo, Joint Bokaro, Jarangadih and Sawang. It also connects some private collieries at Dhori. There is an Inspection Bungalow at Nawadih on the 12th mile of Dumri-Nawadih road.

The Charhi-Parej road is 7 miles long. It connects the West Bokaro colliery which is under the management of Messrs. Anderson Wright, with the Hazaribagh-Ranchi road. There is an Inspection Bungalow at Tapin on the 4th mile of the road.

The Nayasarai-Argada-Sikra road starts from the 30th mile of the Ranchi road and connects the Argada State colliery and a private colliery at Sikra run by Messrs. Bird and Co. The length of the road is $5\frac{1}{2}$ miles.

Ramgarh-Bhurkunda road starts from the 32nd mile of the Ranchi road. It connects the Bhurkunda State Colliery with Ranchi road. The total length of the road is 13 miles.

On an average the Mines Board spends the sum of Rs. 1,18,120 annually on the maintenance of these roads.

ROADS MAINTAINED BY THE DAMODAR VALLEY CORPORATION

The following roads have been constructed and maintained by the Damodar Valley Corporation in the district of Hazaribagh :—

Name of road and location.	Necessity.	Mileage.
(1) National Highway No. 31, Ranchi-Patna Diversion Road, Chandwara to Burhi.	A portion of old Ranchi-Patna Road is submerged under water of reservoir of Tilaiya Dam.	9 miles.
(2) National Highway No. 31 Ranchi-Patna Diversion Road, Chandwara to Barhi.	Ditto ..	550 feet.
(3) Access Road to Tilaiya dam site, Urma to Tiliaya Dam.	Construction of Tilaiya Dam ..	3½ miles.
(4) Bishengarh-Gomia Road—		
(a) Section (I), Bishengarh to Jamni-jara.	For Konar Dam construction work, movement of materials and equipment.	7 ..
(b) Section (II), Arjari to Gomia ..	Ditto ..	10.45 ..
(5) Konar Road connecting Bishungarh-Gomia road in 14th mile and Bokaro Thermal Power Station.	For connecting Konar Dam in 7th mile of Bishungarh-Gomia Road to Bokaro Thermal Power Station.	7.25 ..
(6) Bermo Road, Bokaro to Dermo ..	For connecting Bokaro with Grand Trunk Road in mile 202 via Bermo on Gomia-Jeri Road.	5 ..

RAILWAY COMMUNICATION.

At present four different routes of railway pass through the district of Hazaribagh, namely :—

- (a) Madhupur-Giridih Branch.
- (b) The Grand Chord Section.
- (c) Gomoh-Barkakana—Barwadih Section.
- (d) Barkakana-Ramgarh Town—Muri Section.

(a) *Madhupur-Giridih Branch.*—The date of opening of this section is 1st January, 1871. The area falling within the district of Hazaribagh has got a route mileage of 15.83 and track mileage of 20.98. Only Mahesmunnda and Giridih stations come within the district of Hazaribagh, of which only the latter station is important from the commercial point of view.

Giridih.—This station is located at 206th mile from Howrah. Two important industries served by this station are mica and coal. The collieries here are owned by the State Railways.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
1952-53 ..	2,01,025	1,48,435	Tons. 2,57,723	Tons. 40,784
1953-54 ..	2,00,015	1,79,220	2,00,966	80,726

Processed mica forms an important outward traffic from this station. This is always despatched to K. P. Docks for export by ship. The next item of outward traffic is coal. Inward traffic comprises all miscellaneous articles including unprocessed mica.

(b) *Grand Chord Section.*—In February, 1907 this section was opened for traffic. The area within the Hazaribagh district has a route mileage of 61.12 and track mileage of 137.77. There are 11 stations on the Grand Chord within this district beginning from Nimiaghat and ending with Gujhandi. From the point of view of coaching and goods traffic, Parasnath, Hazaribagh Road and Kodarma are the only important stations.

(i) *Parasnath.*—This station is at 197th mile from Howrah. At about 12 miles from this station there are Jain temples situated on the Parasnath Hill. The Jain pilgrims visiting these temples have to pass through this station.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
1952-53 ..	44,046	46,685	Tons. 5,311	Tons. 10,494
1953-54 ..	40,714	50,123	7,938	3,953

The principal stations to which goods are booked from this station are Calcutta, Belghurria collieries, Naihati, and Kankinara. Inward traffic of goods generally come from Howrah, Kanpur and Wadi Bunder. The main outward traffic in this area is soap-stone and forest produce.

(ii) *Hazaribagh Road*.—This station is situated at 214th mile from Howrah. This is connected to Hazaribagh town with regular bus services. There is also an Out Agency in Hazaribagh town to and from which goods and parcel traffic can be booked. The Damodar Valley Corporation have been using this station for getting their necessary machineries for the dam construction.

The Konar Dam is about 24 miles from this station.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward..	Inward.
			Tons.	Tons.
1952-53 ..	63,868	1,00,629	5,454	36,358
1953-54 ..	1,16,253	94,146	4,741	13,662

Outward despatch of goods from this station is not so important. Inward goods traffic comprises salt, petrol, motor accessories, miscellaneous goods and iron consignments for the Damodar Valley Corporation.

(iii) *Kodarma*.—This station is situated at 244½ miles from Howrah. Mica mining is the important industry in this area. The outward despatch of mica for export was heavy in the past but for the last few years it has fallen considerably due to loss of foreign markets for the mica produced in this area.

The volume of passenger and goods traffic from this station is as follows :—

Year	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
			Tons.	Tons.
1952-53 ..	1,32,543	1,45,543	9,874	47,773
1953-54 ..	1,35,071	1,42,613	15,137	30,237

Timber, stone chips, mica and other miscellaneous products are booked from this station. Inward traffic comprises general merchandise.

(c) *Gomoh-Barkakana—Barwadih Section.*—This section was built in stages commencing from the 1st April, 1927 and completed on the 1st February, 1929. The route mileage in Hazaribagh district is 81.92 and track mileage 137.52. There are 17 stations in the Hazaribagh district falling on this section, beginning from Telo and ending with Hendegir station. The important stations on this section are Bermo, Bokaro, Ranchi Road, Barkakana and Bhurkunda.

(i) *Bermo.*—Bermo is important only for clearance of coal from the State Railway collieries which are situated here.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
			Tons.	Tons.
1952-53 ..	98,852	99,948	11,23,857	33,510
1953-54 ..	90,080	85,990	13,34,058	16,160

(ii) *Bokaro*.—At Bokaro there is a big Thermal station of Damodar Valley Corporation with three turbines each capable of generating 5,000 kilowatts of energy. The Konar Dam is 12 miles away from this station. The main inward goods traffic here consists of colliery accessories and foodgrains.

(iii) *Ranchi Road*.—This station is connected to Ranchi town by good metalled road and regular bus services controlled by the Railway ply between the two points. Inward traffic at this station is mainly for Ranchi town. There is also an Out Agency at Ranchi town and another at Hazaribagh to and from which parcels and goods traffic can be booked in limited quantities.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
			Tons.	Tons.
1952-53 ..	72,415	87,404	12,124	35,084
1953-54 ..	80,116	86,176	14,535	28,802

Inward goods traffic at this station comprises general merchandise, petrol, oil-seeds and timber. The principal stations to which goods are booked are Howrah, Kantapukur, Sitamarhi, Mokamah Ghat and Bankura.

(iv) *Gomia*.—Messrs. Imperial Chemical Industries have acquired 625 acres of land to set up an explosives Factory at Gomia. The construction of staff and workers' housing was commenced at the end of 1955 and is about completion. Much progress has been made to clear the site. The execution of the project would enhance the prestige of the Gomia Railway Station.

(v) *Barkakana*.—This station is situated 249 miles from Howrah, and connected by road to Ramgarh town where the army headquarter is situated.

Inward traffic here comprises mainly consignments to the military, foodgrains and colliery accessories of Sirka and Arga collieries.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
			Tons.	Tons.
1952-53 ..	43,540	34,518	7,83,208	2,58,662
1953-54 ..	38,951	30,446	5,50,892	3,30,912

The principal stations to which goods are booked are Panagarh, Howrah, Kanpur and the Kumardhubi siding.

(vi) *Bhurkunda*.—This station is situated on the Barkakana-Barwadih section, 256 miles from Howrah. The principal industry here is the Sodepur Glass Works. The inward raw materials for this factory comprises of furnace oil, soda ash, timber and coal. Sheet glass is the main outward traffic.

The volume of passenger and goods traffic from this station is as follows :—

Year.	Passenger.		Goods.	
	Outward.	Inward.	Outward.	Inward.
			Tons.	Tons.
1952-53 ..	19,093	17,496	1,48,885	14,192
1953-54 ..	21,803	20,098	1,60,330	19,274

(d) BARKAKANA-RAMGARH TOWN—MURI SECTION.

(i) *Ramgarh Town Station*.—This is the only important station in Barkakana-Ramgarh Town—Muri Section. The close proximity of Ranchi Road Station has partially eclipsed the importance of this station. The volume of goods and passenger traffic from this station is not large.

OTHER COMMUNICATION.

There is no river communication worth mentioning in Hazaribagh district. Almost all the rivers dry up in summer, are in raging floods during monsoon and are fordable after the floods are over. During the rainy season, when rivers are full, ferries are maintained at the following places on the rivers noted below :—

Damodar River.

- (1) Chackary Ghat.
- (2) Tenoo Ghat.
- (3) Pichri Ghat.
- (4) Chhaperdih Ghat.
- (5) Dugda Ghat.
- (6) Rangmati Ghat.
- (7) Thakur Ghat.

Barakar River.

- (8) Toondi Ghat.
- (9) Barakar Ghat.
- (10) Khaira Ghat.
- (11) Sara Ghat.
- (12) Baradih Ghat.



VEHICULAR TRAFFIC.

Bullock-cart trains, as mentioned before, were substituted by *push-push* vehicles which depended on human agency for locomotion. They were light carts with shades and covers and both drawn in front and pushed from behind by men. There used to be regular *chatties* (halting stations) for change of the men and also for rest of the passengers. The *push-push* was replaced by bus service introduced by a German from Hazaribagh. Camel-drawn vehicles were also in vogue from Hazaribagh town to Hazaribagh Road. Camels, however, did not stand the climate of the district. The bus traffic has now enormously developed and almost all the thanas in the district are now served by

motor bus. Lal Motors have been the pioneer after the German enterprise. The first stage carrier permit was granted to Messrs. Hazaribagh-Ranchi Motor Service in 1920. From the official records it appears that the first car in Hazaribagh district was brought to Birni in the subdivision of Giridih in the year 1921. In 1927 the Raj Kumar of Tekari brought his first car and registered in Hazaribagh town. Since 1920 motor cycles too have come into use in the coal-fields.

There are now about 55 bus services plying as stage carriers within the district. Some of them do several trips on the same route. Moreover the traffic in goods for long distances is done by trucks. It is difficult to have a census of the motor trucks on Hazaribagh roads because a large number of trucks registered outside the district or outside Bihar have their permits for plying within Hazaribagh district. The Chotanagpur Regional Transport Authority with their headquarters at Ranchi control the movement of the carriers both public and private as well as of taxi cars. At present there are 199 public carriers, 27 private carriers and 23 taxi cars. The villages which are not situated on the main arteries are still served by the orthodox *sagars*, bullock carts and *khatolees*. *Sagars* are very light wooden-carts pulled by bullocks while *khatolees* are carried on the shoulders of men.

AVIATION.

Hazaribagh is not a recognised Air Station on the aviation map of India. There are civil air strips at Hazaribagh and Giridih for smaller types of planes.

POSTAL COMMUNICATION.

The postal mileage at present is 923 miles as against 588 miles mentioned in the last District Gazetteer. In 1952 the number of Post Offices in Hazaribagh district was 74 out of which 13 offices were Telegraph Offices as well.

The average weekly number of postal articles delivered in 1952 was 5,77,553. The value of money orders paid within the district is Rs. 57,45,945-8-8 and those issued from Hazaribagh district is Rs. 87,69,629-3-4. In 1915-16 the difference between money orders paid and issued was Rs. 1,000. In 1951-52 the difference approximated to Rs. 3,000. The figures of emigrations are accounted for by the money orders issued. The number of Savings Bank deposit was 16,106 and their value was Rs. 20,52,538-15-3 and the withdrawals were Rs. 16,83,226-3-9. In 1951-52 1,441 radio licenses were issued. The number of National Savings Certificates was 486 costing Rs. 2,37,435 and 713 National Savings Certificates were discharged; the cost of discharged certificates was Rs. 1,30,171-4-0.

REST BUNGALOWS.

The Rest Bungalows that exist are named below :—

1. Maintained by the District Board.

Hazaribagh, Ramgarh, Gola, Petarbar, Manjhidi, Barkagaon, Tandwa, Sariya, Kodarma, Markacha, Chatra, Pitiz, Huntergunj, Giridih, Jamua, Dhanwar, Gawan. Satgawan, Barkatta, Gomia, Dudhimati, Khejoori and Semaria.

2. Maintained by the Public Works Department.

Hazaribagh Inspection Bungalow, Morangi Restshed, Mandu Inspection Bungalow, Kuju Restshed, Naisarai, Hupta Restshed, Tata Jharia Inspection Bungalow, Bagodar Inspection Bungalow, Sariya Restshed, Dumri Inspection Bungalow, Pirtand Restshed, Giridih Inspection Bungalow, Barkatta Inspection Bungalow, Barhi Inspection Bungalow, Chouparan Inspection Bungalow, Danua Inspection Bungalow, Chatra Restshed.

3. Maintained by the Forest Department.

A list of forest bungalows has been given in the chapter on Forest.



CHAPTER X.

LOCAL SELF-GOVERNMENT.

HISTORY.

In 1900 the provisions of the Local Self-Government Act III (B.C.) of 1855 were extended to this district and the Hazaribagh District Board was established. The Board then consisted of 17 members of whom 6 were *ex officio* members, by virtue of their office, 8 were non-officials appointed by the Government and only 3 were elected by the members of the Giridih Local Board. The Deputy Commissioner of the district was the *ex officio* Chairman and the Vice-Chairman was elected by the members. The duration of the office of the Board was for a period of three years only. A second stage of progress was reached when the Chairman was made *ex officio* and members were elected or nominated.

Election for the office of the Chairman was introduced in 1939. Since 1939 a number of changes were introduced. The number of the members comprising the Board was raised to 40 out of which 28 were elected by the electors of the different constituencies who pay Chaukidari tax, 9 were nominated by the State Government and 3 were representatives of Mining Associations (two from the Coal Mining Association and one from the Mica Mining Association). Now both the Chairman and the Vice-Chairman are elected from amongst these members.

LOCAL BOARD.

The District Board has two Local Boards, one at Giridih and the other at Chatra. The Local Boards look after the local administration and are under the administrative control of the District Board. The Giridih Local Board was created in the year 1906 and the Chatra Local Board was created in the year 1944. The Giridih Local Board was previously composed of 9 members and the Sub-divisional Officer of Giridih Subdivision was the *ex officio* Chairman. The rest of the members were nominated non-officials. Since 1947 the Giridih Local Board has 14 members, out of which 11 are elected and the rest are co-opted by the District Board. The Chatra Local Board consists of 8 members, of which 6 are elected and 2 are co-opted by the District Board. Full powers in respect of Education, Veterinary and Civil Works have been delegated to the Local Boards with necessary funds by the District Board. The Local Boards prepare their own budget which are incorporated in the main budget estimates of the District Board.

UNION BOARDS.

There are six Union Boards under the direct control of the District Board. They are situated at the following places :—

- (1) Ichak.
- (2) Mirzaganj.
- (3) Gola.
- (4) Dhanwar.
- (5) Sariya.
- (6) Chitterpur.

The Union Boards are mainly for sanitation. They receive a block grant of Rs. 11,170 from the District Board and they are empowered to raise further funds up to a certain limit through taxation. Their budget estimates are controlled and passed by the District Board. The members of the Union Board are elected. The Union Boards are now being replaced by the Gram Panchayat.

MINES BOARD.

With the creation of the Mines Board in 1939, the mining area of approximately 160.24 square miles with a population of 1,50,000 has passed from the jurisdiction of the District Board to the Mines Board. The Mines Board consists of 11 members two of whom are representatives of the District Board, two are nominated by the Railway Board, two are elected by the Indian Mining Association, four are nominated by the State Government and one person in the service of the Government to be nominated by the State Government (at present the Deputy Commissioner of Hazaribagh as the Chairman of the Board). The Deputy Commissioner is the *ex officio* Chairman. The duties of the Mines Board are more or less the same as those of the District Board.

JURISDICTION AND DUTIES OF THE DISTRICT BOARD.

With the exception of the area of 160.24 square miles under the Mines Board the jurisdiction of the District Board extends to the rest of the district.

The duties of the District Board consist mainly of looking after the means of communication (construction and maintenance of the public roads, construction of new roads, bridges, maintenance and buildings of rest houses), promotion and supervision of education, sanitation, medical relief to human beings, veterinary aid for the livestock and water supply of the district. Ferries and cattle pounds are also under the control and direct management of the Board.

INCOME.

The main source of income is the cess on land, cess on mines and forests. On the average of four years, that is 1950-51 to 1953-54, the cess receipts under these heads may be said to be Rs. 5,39,586 annually. Due to abolition of zamindari the cess income of the Board has fallen in arrears to some extent. Collection of cess is made by the State and the amount is credited to the District Board's account after the deduction of collection charges. Government contributions amount to about Rs. 2,00,000. Income from pounds, ferries and other miscellaneous receipts approximate to Rs. 7,500, Rs. 2,500 and Rs. 50,000, respectively. In addition to this special grants are also received from Government for specific purposes. Such grants for 1951-52 to 1953-54 were as follows :—

				Rs.
1951-52	...	...	...	7,22,132
1952-53	...	...	...	5,77,099
1953-54	...	...	...	7,34,011

Previously, the income from coal mines was a source of income to the District Board. But due to the creation of the Mines Board the revenue of the District Board has been affected adversely. The distribution of coal cess between the Mines Board and the District Board is on a 50 : 50 basis but up to a limit of Rs. 3,00,000. If the revenue exceeds this amount, the excess is distributed at 75 : 25 basis, 75 per cent going to the District Board and 25 per cent being allotted to the Mines Board. The amount of cess receipt by the District Board is as follows :—

Year.	Coal cess.	Mica cess.	Forest cess.	Land cess.	Total.
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
1950-51	2,07,954	38,434	63,293	1,06,254	4,15,936
1951-52	2,81,928	64,360	5,799	70,335	4,10,816
1952-53	3,84,538	1,45,827	53,422	56,349	6,40,138
1953-54	4,88,212	45,525	14,519	17,199	6,91,456

EXPENDITURE.

The main items of expenditure are Education, Medical Services and Public Health, Veterinary Services, and Civil Works.

Education.

The District Board directly manages 39 middle schools, 113 upper primary schools and 637 lower primary schools. The Board gives aid to four middle schools. In 1952-53 the District Board had employed 1,474 teachers and a sum of Rs. 6,94,260 was spent on their remuneration and allowances. An inspecting staff is maintained by the State Government and the staff advises the Board in the management and running of schools. There is an Education Committee consisting of 8 members out of whom 4 are members of the Board and 4 are co-opted by the Board. The Committee deals with all matters connected with education and forwards its proceedings and suggestions to the Board for confirmation. The Education Committee is formed every year.

Medical Services and Public Health.

The Board maintains 29 Allopathic dispensaries, 6 Ayurvedic dispensaries and aids or subsidises 29 dispensaries. The 29 Allopathic dispensaries are provided with two beds each for emergency cases. The total expenditure incurred on Medical Relief during the year 1952-53 amounted to Rs. 1,61,491.

The staff appointed to look after the Public Health consists of one District Health Officer, three Assistant Health Inspectors, 33 Health Inspectors, 56 Vaccinators, 66 Disinfectors and 17 Sanitary Inspectors. A sum of Rs. 1,67,442 was spent on this department in 1952-53. There are 693 wells excavated by the District Board. The Board has appointed a Sanitation Committee consisting of 11 members of whom 5 are co-opted and the rest are members of the Board. Like the Education Committee this Committee is formed every year.

Veterinary Services.

Nine Veterinary Assistants are employed at the joint expense of the Board and the Government, while one touring Veterinary Assistant Surgeon at Sariya is maintained entirely at the cost of the Board. Of these Veterinary Assistants two are attached to Hospitals, one at Hazaribagh and the other at Giridih, while the rest tour the interior.

Approximately a sum of Rs. 33,000 is spent annually on this department.

Civil Works.

The Board has a Public Works Committee and all matters concerning Civil Works are sent to the Board through this Committee. The Committee consists of 7 members of whom 3 are co-opted and is constituted every year. It attends to the construction and maintenance of the roads, bridges, culverts, buildings, Dak and Inspection Bungalows. The Board has a total length of 871 miles of roads, 7 Dak Bungalows, 10 Inspection Bungalows and 189 school buildings, apart from its office buildings at Hazaribagh, Giridih and Chatra. On account of heavy repayment of loan every year and on account of the division of income between the District Board and the Mines Board, the Board is forced to reduce its expenditure on repairs to roads by nearly 50 per cent. The Board spends approximately Rs. 40,000 every year on this department.

Pounds and Ferries.

The Board is managing 80 pounds and 12 ferries. The receipt from pounds and ferries approximate to Rs. 10,000 every year.

Rest Bungalows.

The District Board maintains 23 Inspection and Dak Bungalows at the following places :—

Hazaribagh, Ramgarh, Gola, Peterbar, Manjhidih, Barkagaon, Tandwa, Sariya, Kodarma, Markacha, Chatra, Pitiz, Huntergunj, Giridih, Jamua, Dharwar, Gawan, Satgawan, Barkatta, Gomia, Dudhimati, Khejoori and Semaria.

MUNICIPALITIES.

Hazaribagh Municipality.—The Municipality at Hazaribagh was established on the 1st April, 1869, later covered by the Bengal Municipal Act of 1884. The area included within the municipal limits according to the Census Report of 1951 is 7.1 square miles. The present population is 33,812 and the number of rate-payers is 4,231 or 12.2 per cent of the population. The municipal area is divided into 10 wards and the number of Commissioners to be elected is 21 and the number of those to be nominated is 5. Previously the Deputy Commissioner used to be the *ex officio* Chairman but since 1922 the Chairman is also elected from amongst the members.

The income of the Municipality is largely derived from the holding tax which is $8\frac{1}{2}$ per cent of the annual value of the holdings. The latrine tax which is $7\frac{1}{4}$ per cent of the holding tax and fees on dangerous trades, and taxes, fees on vehicles other than motor cars, trucks and buses. Vehicles that are taxed are carts, *sagars*, cycles, *tamtams*, hand-carts and rickshaws. The total income of Hazaribagh Municipality in 1952-53 was Rs. 8,21,563 out of which Rs. 6,099 is received from registration of license and vehicle tax, Rs. 84,362 from holding and latrine taxes, Rs. 1,445 from license fees on dangerous trades, Rs. 19,946 from municipal properties, Rs. 1,620 from miscellaneous sources. Rs. 3,89,928 from grants from Government, and Rs. 3,18,163 from extraordinary and debt.

The per capita ensue of total income is Rs. 2-8-0 and the incidence of income from taxes per capita is Rs. 13-7-0. The main items of expenditure are administration, lighting, interest on loan, water supply, conservancy, medical relief and public health, civil works and education. In the year 1952-53 the total expenditure of the Municipality amounted to Rs. 7,54,032 out of which Rs. 14,500 was spent on general administration, Rs. 12,892 on public safety, Rs. 7,801 on epidemics, Rs. 8,171 on drainage, sewerage, etc., Rs. 722 on water supply. Rs. 84,262 on conservancy, Rs. 20,788 on miscellaneous items, Rs. 2,351 on medical, Rs. 27,442 on public works and public convenience, Rs. 49,722 on public instruction, Rs. 5,11,649 on interest on loans and other items such as loan charges, printing charges, etc., and Rs. 13,732 on extraordinary items.

Since 1949 when primary education was made free for all, the Government increased its education grant from about Rs. 12,000 to Rs. 27,000. In the year 1952-53 the Government granted Rs. 34,726 for education, Rs. 812 for civil works and Rs. 1,400 for public health. Since the year 1951 electric lights have replaced kerosene lamps on the streets and by constructing an earthen dam over river Chharwa, four miles away from the town, water pipes have been brought to Hazaribagh. For this work, since 1951 to 1953, the Government granted Rs. 6,23,524 to the Hazaribagh Municipality. The scheme has been executed and water supply is now given through pipes since the 29th of May, 1954.

The Municipality maintains 14.62 mileage of roads out of which 2.17 miles are metalled, 5.28 miles are coal-tarred, 3.5 miles are gravelled and 3.67 miles are *kutchha*. The Municipality maintains 18 schools, namely, one middle school, 5 upper primary schools and 12 primary schools.

Chatra Municipality.—Chatra Municipality was created in 1869. The area covered by Chatra Municipality is 3.78 square miles. The number of tax-payers is 1,940 as against 9,943 which is the population according to 1951 Census.

The Municipality maintains 10 upper primary and lower primary schools. It maintains 9.13 miles of roads out of which 1.08 is metalled.

The income and expenditure of Chatra Municipality under the different heads for the year 1952-53 are as follows :—

Income.		Expenditure.	
	Rs.		Rs.
1 Holding, latrine, water, lighting, drainage, etc., taxes.	8,785	1 General Administration and collection charges.	3,703
2 Municipal registration license and other fees such as Cart, Cycle, Vehicle registration fees.	1,072	2 Public safety ..	566
3 License fees on dangerous and offensive trades.	643	3 Epidemic including special establishment charges.	324
4 Other items, i.e., income from cattle pounds.	1,126	4 Drainage and sewerage works including vaccination.	842
5 Registration under Special Acts	10	5 Water supply and water works.	491
6 Revenue derived from municipal properties and powers apart from taxation.	4,584	6 Conservancy ..	5,822
7 Grants and contributions from Government.	12,963	7 Miscellaneous, i.e., markets and slaughter houses and other miscellaneous items.	583
8 Miscellaneous ..	75	8 Medical ..	953

Income.		Rs.	Expenditure.		Rs.
9	Extraordinary and debt.	2,361	9	Public works and public convenience.	1,611
			10	Public Instructions ..	7,331
			11	Interest on loans and other items such as law charges, printing charges, etc.	6,791
			12	Extraordinary and debt payment, advances and deposits.	2,666
Total ..		<u>31,439</u>	Total ..		<u>31,683</u>

Giridih Municipality.—The Municipality of Giridih was established in 1902. The municipal area then comprised of Barmania, Makatpur, Baraganda and Giridih towns. In 1919, village Baro was included in the municipal area. The area has since increased to 3.06 square miles from 1.35 square miles. The number of holdings is 4,348. The number of tax-payers is 4,114 as against 29,469, the population according to 1951 Census. There are 20 Municipal Commissioners out of whom 16 are elected and 4 are nominated by the Government. The Chairman and the Vice-Chairman are elected by the Municipal Commissioners while the Municipal Commissioners are elected from the different wards. There are one middle and seven primary schools managed by the Municipality. The figure of primary schools also includes such primary schools which receive only grants-in-aid. The Municipality gives grant-in-aid to two Homeopathic dispensaries.

The receipts and expenditure for 1952-53 for Giridih Municipality are as follows :—

Receipts.			Rs.
(A)	Municipal Taxes	... ..	88,614
(B)	Municipal registration, license and other fees		19,910
(C)	Realisation under special Acts	...	1

	Rs.
(D) Revenue derived from municipal property and power apart from taxation ...	4,147
(E) Grant and contribution for general and special purposes ...	47,617
(F) Miscellaneous ...	2,486
(G) Extraordinary and debts ...	17,141
Total Receipts ...	1,79,916
Opening Balance ...	51,403
Grand Total ...	2,31,319

Expenditure.

	Rs.
(A) General Administration and collection charges	11,639
(B) Public safety ...	5,578
(C) Public Health ...	11,154
(D) Medical ...	626
(E) Public Convenience ...	16,307
(F) Public Instruction ...	30,889
(G) Miscellaneous ...	7,129
(H) Extraordinary and debt ...	9,870
Total Expenditure ...	93,192

Notified Area Committee, Jhumri Tilaiya.—This Notified Area Committee was constituted in the year 1952. This replaced the Union Committee that was here prior to 1952. Its jurisdiction is over an area of 17.16 square miles divided into 8 wards.

The Committee consists of 15 nominated members; the Sub-divisional Officer of Sadar is the *ex officio* Chairman, the Inspector of Mica Accounts, Assistant Electrical Engineer, and Subdivisional Officer, Public Works Department are *ex officio* members. The other 11 members are non-officials. To start work the Government granted an interest-free loan of Rs. 10,000. Holding tax at 10 per cent, latrine tax at 2½ per cent and light tax at ½ per cent on the annual rental value of the holdings are levied. In addition to this license fees and registration fees are also realised.

The income including the initial Government loan of Rs. 10,000 was Rs. 46,174 in the year 1952-53 and the expenditure amounted to Rs. 26,991 for the same year.

The Committee maintained only one primary school in the beginning and now it maintains four primary schools excluding one night school within its area. It also maintains one mile of *pucca* road, 66 yards of brick-paved road, 885 yards of gravelled road and 13 miles of *kutchia* road approximately. The population is about 30,000 and the number of rate-payers is 1,465 at present.

RAMGARH CANTONMENT.

A regular cantonment under the Cantonments Act of 1924 was constituted at Ramgarh with effect from the 15th March, 1941. The prisoners of war camp during the Second World War and the training camp for Chinese troops were situated here throughout the continuance of the hostilities and the historic session of the Indian National Congress of 1940 was also held here under the Presidency of Maulana Abul Kalam Azad. The Cantonment occupies an area of 13.9 square miles and has a road mileage of 26 miles. Out of this area the Government have acquired and own one-sixth of the lands while the rest is private property and has been included in the Cantonment to secure control over the neighbouring civilian population in the interest of the health and welfare of the troops. In this respect, Ramgarh differs from all other cantonments in India, where invariably almost all lands included in the Cantonment are owned by the Government. The civilian population of the Ramgarh Cantonment according to the Census of 1951 is 14,775. The administration of the Cantonment was, originally, in the hands of a Board consisting of the Commanding Officer, one nominated military officer and one civilian nominated member. Since 1948, a full-fledged Cantonment Board consisting of 15 members with 7 elected and 8 official members is functioning.

The chief sources of income are grant from Central Government, house tax, dog tax, bullock-cart tax and cycle and rickshaw tax. In the year 1953-54 the total income was Rs. 1,88,759-12-0 while the expenditure amounted to Rs. 1,80,613. The Board maintains one dispensary, one upper primary girls' school, a library and a reading room. Schemes are under consideration for establishing one in-patient ward in the Cantonment dispensary and for the expansion of primary education.

The Gandhi Memorial High School is situated within the Cantonment and caters to the needs of the residents of the Cantonment and surrounding areas.

GRAM PANCHAYAT.

The Bihar Panchayat Raj Act of 1947 is being implemented in this district from the 17th November, 1948. The Act aims at establishment and development of Local Self-Government in the village communities and to organise and improve their social and economic life.

The 6,129 villages of Hazaribagh district have a rural population of 18 lakhs and 50 thousands. The area of these villages approximates to 7,016 square miles. At present there are 401 Gram Panchayats working which means that on average a Gram Panchayat looks after 17 villages of about 17 square miles in total and approximates 4,613 persons. Out of these 401 Panchayats, 104 are, at present, notified and the rest, i.e., 297, are probationary Gram Panchayats.

The Gram Panchayats function through three separate bodies, namely,—

- (1) Mukhia and his executive committee.
- (2) Gram Cutcherry consisting of 15 panches headed by a Sarpanch.
- (3) The village volunteer force headed by a Chief Officer called Dalpati.

The Mukhia and the 15 panches are elected on the basis of adult franchise. The executive consists of not less than 7 and not more than 14 members; this number includes the Mukhia as well. These members are nominated by the Mukhia.

He also appoints the Chief Officer to organise and control the village volunteer force. Every adult who is not convicted, who is not insolvent or charged with moral turpitude can be a member of the Gram Panchayat. Usually there are two general meetings, to pass the budget and to consider accounts.

A Gram Panchāyat has to look after (a) sanitation and conservancy, (b) medical relief and first aid, (c) supply and storage of water and its disinfection, (d) maintenance of crop, animal and vital statistics, (e) control and prevention of epidemics and infectious diseases, and (f) maintenance and construction of village roads and paths. Apart from these compulsory duties, it is also charged with a set of optional duties, such as (a) primary education and (b) improving the breed of livestock.

The Gram Panchayat can assess, impose, levy and collect taxes like labour tax and property tax to carry out its duties.

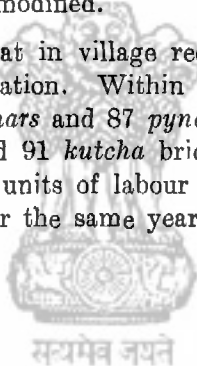
It is also provided with an elective judiciary in the shape of Gram Cutcherry to discharge its limited judicial functions. It is empowered to try petty offences and to adjudicate civil suits up to the valuation of one hundred rupees. It functions both as original and appellate courts, the original bench consisting of the sarpanch and two panches nominated

by the parties to the dispute and the appellate bench consists of its entire panel of 15 panches of which 8 form the quorum. It mainly works as a court of conciliation and tries to bring about an amicable settlement of disputes.

The village volunteer force consists of all able-bodied males of the village between the ages of 18 and 30 for general watch and ward duties and to meet the cases of emergency like fire, the bursting of an embankment or dam, outbreak of epidemic and occurrence of burglary and dacoity within the limits of the Gram Panchayat.

During 1951-52, 1,341 cases and 205 suits were filed before the different notified Gram Panchayats of Hazaribagh, 967 cases and 108 suits were compromised, 266 cases and 46 suits were pending. In 6 cases and in one suit appeals were made to the Subdivisional Officer, and, to the Munsif against the decision of panches, but all decisions barring one were either upheld or modified.

The statistics show that in village reconstruction more effort and money were spent on irrigation. Within the year 1951-52, 10 canals, 664 wells, 42 tanks, 259 *ahars* and 87 *pynes* were constructed whereas only two miles of road and 91 *kutchha* bridges and culverts were constructed. The total of the units of labour tax utilised on improvement of communications were for the same year Rs. 43,899.



CHAPTER XI.

AGRICULTURE, LIVESTOCK AND IRRIGATION.

The district comprises of three subdivisions, viz., Sadar, Giridih and Chatra. Except a stretch of level land extending from Chauparan, Kodarma, Dhanbad and Kharagdiha to Giridih the district is full of hills and jungles and intersected by numerous hills. The slopes and stream-beds have been terraced in cultivation and the darker lower lands are richer than the reddish uplands.

SOILS.

There has been no detailed soil survey of the district and hence only a general description of the soils could be given.

Many kinds of soil, namely, gravelly soils, sandy loam, red ferruginous loam, river alluvium and even black sticky clay are found, which show on the average 0.05 per cent Nitrogen, 0.001 per cent Phosphate, 0.010 per cent Potash and 5.5 to 6.8 per cent, the maximum value of Nitrogen being 0.106 per cent and the minimum 0.027 per cent.

According to the commonly accepted terminology the soil of the district can roughly be classified into three categories, namely. (1) *kewal*, (2) *lalki matti*, (3) *dudhiya matti*. *Kewal* soil is dark grey in colour and is the most fertile in the district. With the help of the common manure of cowdung or compost and chemical fertilisers it has yielded up to 120 maunds of paddy per acre. The red soil is more common in the district and grow maize, *bajra* and *arhar* during *kharif* season and *surgujiya* (oil-seed) during *rabi* season. If irrigational facilities are available paddy could also be grown on red soil. *Dudhiya matti* or calcareous soil has an excess of lime and could only be cultivable with the help of a profuse quantity of cowdung and other organic materials.

In the last District Gazetteer of Hazaribagh published in 1917 Lister has classified the land of the district under two broad heads, namely (a) *Don dhan-khet*, terraced or wet land, and (b) Uplands, *tanr*, dry cultivation. He made three classifications under both the categories of land and gave the following statistics :—

- (1) *Don first class*.—The total area was mentioned as 70,366 acres.
- (2) *Don second class*.—This was also known as *dorasa*, *kanali*, *singha* and *gogry* lands with an area of 1,16,483 acres.
- (3) *Don third class*.—This was also known as *Tarakla* or *Tarnkhet* with an area of 3,08,497 acres.

Since the publication of the last District Gazetteer much of this classification has naturally changed owing to more intensive and continued cultivation. A large percentage of third class *Don* lands have been by now transformed into first or second class *Don* lands. Similarly *Don* second class may have been converted by now into *Don* first class by better irrigational facilities, construction of *ails* and use of manures. Some land has also gone out of cultivation.

AGRICULTURAL STATISTICS.

Lister gave the following statistics for uplands or *tanr* lands for dry cultivation.—

- (1) *First class*—known as *bari* or *charbari* including the few plots of land on the level of the river bed which grow sugarcane. The area under this head was 83,364 acres.
- (2) *Second class*—known as *bhita* lands and covers an area of 3,73,435 acres.
- (3) *Third class*—known as *tanr* with an area of 3,37,146 acres.

There have been no survey and settlement operations since 1917 when the last District Gazetteer of Hazaribagh by Lister was published. The present available agency for collecting statistics does not follow Lister's classification of lands.

The agricultural statistics of Hazaribagh district according to the last District Gazetteer (1917) are as follows :—

(1) Total area	...	...	44,71,132 acres or 6,986 square miles.
(2) Forests	...	...	25,24,590 acres or 3,945 square miles.
(3) Not available for cultivation.			3,65,298 acres or 571 square miles.
(4) Cultivable waste (other than fallow)			2,66,263 acres or 416 square miles.
(5) Current fallow			3,43,497 acres or 599 square miles.
(6) Net cropped			9,31,542 acres or 1,445 square miles.

The area of land not available for cultivation is exclusive of forest lands unfit for cultivation. If these be added, the total area permanently unfit for cultivation is 3,004 square miles.

Current fallow includes—

- (a) Land ordinarily cultivated each year, but left uncultivated in the year of record.
- (b) " It is the custom of the district to leave *tanr* lands fallow from time to time. The cycle of years according to which the lands are cropped has been recorded in the case of each field, and reckoning made accordingly. Thus a field of three acres only cropped once in three years, will appear as three acres in the gross column and as one acre in the net column. " The balance of these two areas is shown above as current fallow.

The recent (1953) agricultural statistics collected by the Agricultural Statistics Section of the Revenue Department either through sample survey or by eye estimation or national sample survey are as follows :—

	Acres.
(1) Cropped area	11,75,184
(2) Current fallow	4,58,433
(3) Cultivable waste	4,80,442
(4) Orchard	2,682
(5) <i>Gairmazarua</i> (tanks, houses, etc.) ...	6,22,358
(6) Uncultivated waste	18,17,451
Total	45,56,550

The cropped area expressed in thousand acres now consists of paddy (6,78), wheat (2), gram (18), barley (14), maize (1,01), *masoor* (2), *arhar* (21), *khesari* (5), peas (5), sugarcane (9), potato (9) and chillies (10). *Marua*, *goondli* and oil-seeds also occupy some lands.

AGRICULTURAL SEASON.

The main agricultural seasons in the district are three, namely, (1) *kharif*, (2) *rabi*, (3) *zaid*.

Kharif.—The *kharif* season starts from the third week of May and lasts till the end of October. The main crops grown in this season are paddy, *bajra*, *marua*, maize, *arhar*, etc. Most early varieties of paddy are grown by broadcast method and the seed required is about half a maund per acre. Recently Japanese method of paddy cultivation has been introduced in the district. It is claimed that in some of the areas put under Japanese method of rice cultivation the yield has doubled and has recorded about 30 to 40 maunds of crop per acre. The yield of other crops, i.e., maize, *marua* and *arhar* comes on the average 5 maunds per acre.

Rabi.—The season starts by the end of October and lasts up to the last week of February. The main crops grown during the season are *surgujiya* wheat, gram, mustard, barley, potato, etc. The area sown in this season comes to 1,48,000 acres. Lack of irrigational facilities and stray cattle are some of the reasons that stand in the way of increasing the acreage. Attempts are being made by the Agricultural Department to encourage the cultivators to take the double crop by holding demonstrations of both wheat and *paira* gram. In double cropping mustard seed is put after maize and wheat after paddy. The variety for wheat recommended is the variety known as NP. 52. The variety has been found good in other respects except in threshing. The other varieties of wheat that take to the soil are BR. 319, NP. 761, 755 and 799. The average yield of *surgujiya* is 3 maunds per acre.

Zaid.—During this season from the beginning of March up to the second week of May people grow mostly vegetables, like *kadu*, *kohra*, *bhindi*, french beans, etc. Two vegetable belts have been encouraged in the district. One is within the radius of five miles of Hazaribagh and another round about Giridih. The total area of the vegetable belts of the district is about 1,700 acres. Vegetables are also grown in the winter and rainy seasons. There is a great scope for more vegetables to grow in this district.

SEED.

As improved seeds will considerably add to the yield, tested seeds from the Government Farm Research Station of Sabour and Pusa are distributed to the cultivators. The cultivators are encouraged to select a particular plot and grow crops from the tested seeds as distributed by the Agricultural Department on condition that half of the yield should be given to the department as seeds. In this way it is expected that there will be provisions for more of better types of seeds.

The recommended varieties of seeds for the main crops of this district are as follows :—

Paddy—BK. 115, BK. 36, BK. 141, BK. 88 and Kanke II.

Wheat—NP. 52, NP. 761, BR. 319.

Arhar—Tumur variety, BR. 65.

Gram—S. 4.

Sugarcane—B. O. 17 and B. O. 419.

Barley—BR. 22.

Maize—Kalimpong and Jaunpur.

AGRICULTURAL IMPLEMENTS.

The main agricultural implements that are in vogue in this district are indigenous ploughs and heavy wooden planks (*patta* or *hanga*). These implements do not generally attain the necessary tilth in the soil, as is expected of mould board ploughs.

The ploughs that are recommended by the Agricultural Department, that is, the Bihar Junior and Senior ploughs are used by the cultivators to a very limited extent. The main difficulty in this connection is the poor draught capacity of the local bullocks.

Some of the big farmers are using tractors now. Tractor cultivation will be economic and useful only if the plots are large. The scope for mechanised cultivation is, however, limited. Owing to the inheritance laws of the country after the death of the recorded tenant his lands are likely to be subdivided. It is only such land-owners who have got big plots of land that can employ a tractor. There are also difficulties in getting properly trained tractor personnel. Facilities for repairs of tractors or replacement of tractor parts are not adequate.

MANURE.

The last District Gazetteer shows that there was no other manure available in the district than the cowdung. Recent experiments have been going on to find out the particular type of manure that will be suitable to the different soils in different areas.

In recent years there has been more use of rural compost, town compost, and green manure. Chemical fertilisers, such as ammonium sulphate, superphosphate and bonemeal have been introduced and the agriculturists are slowly taking to them. The chemical fertilisers require a lot of water and there can only be more use of chemical fertilisers provided there are proper irrigational facilities.

Green manuring is also done. Practically green manure was not known in the district sometime back. *Sanai* is used for uplands and *dhaincha* for lowlands. The cultivation of *berseem* is coming into vogue both for green manuring and as a fodder for the cattle.

Compost schemes both in rural and in urban areas have been useful. In the rural area cowdung is largely used for this purpose and the villagers are getting compost minded. Town compost schemes based on night-soil and refuse of the town have been successful at Hazaribagh, Giridih and Ramgarh Cantonment areas. Cultivators are supplied town compost from the depots of these places. On chemical analysis, the town compost of Hazaribagh Depot has been found to contain 10 per cent of Nitrogen and 6 per cent of Phosphate and has had very good results on many crops specially vegetables.

PLANT PROTECTION.

A Plant Protection Unit of the Agricultural Department has been working since 1951. Insecticides and fungicides have been also placed at the disposal of the Agricultural Inspectors in each subdivision, to tackle the problem, in case of emergencies. These depots have been also given modern dusters and sprayers for the purpose. There are four outstanding plant protection problems in this district.

STORAGE OF POTATO AND GRAINS.

Potato tuber moth is prevalent in this district and it destroys the crops by making holes in the tuber. At the time of storage it again damages the tuber when the larvæ dig tunnels in them and thus render them useless for seed purpose. Due to the lack of facilities for cold storage the cultivators have to fall back upon indigenous methods and thus they lose a good deal of potato.

PESTS IN PADDY.

The most important pest here is the *gundhi* bug. In the year 1952-53 it created a havoc and hundreds of acres of paddy crop were threatened. The *gundhi* bug sucks the juice of the grains and thus renders them useless. It starts in a virulent way and unless prompt measures are taken, the whole area is threatened.

CONTROL OF MANGO HOPPERS.

Mango hoppers suck the juice at the time of flowering and render the flowers incapable of producing any fruit. As a preventive mango trees are treated against the pests.

LOCUST CONTROL.

Locust visitations are not common. In June, 1953 there was a small visitation of locusts but no serious damage was done.

MISCELLANEOUS.

The Plant Protection staff has also to take steps against the common diseases that affect groundnut, maize, sugarcane, etc. The villagers are slowly turning to the use of insecticide to protect their crops.

LAC CULTIVATION.

Lac was an important industry in Chatra subdivision before. The most important host trees for lac in Hazaribagh district are *kusum*, *palas*, *bair* and *khair*. With the fluctuation in the demand for the lac the cultivation of the crop has also had its vicissitudes. Lac cultivation is mostly confined to Chatra subdivision.

Demonstrations for improved method of lac cultivation are carried out at the villages.

HORTICULTURE.

From Horticulture point of view Hazaribagh is poorly developed. The soil being mostly hilly it may not be possible to have successful orcharding in all the areas. But looking at the acreage under different fruit crops it can be said very well that there is a good scope for its development so far as mango, custard apple, jackfruit and papaya are concerned.

Hazaribagh papayas have a considerable fame even outside the State. The Agricultural School at Sitagarha has a fruit production scheme attached to it. The seedlings and grafts raised in the nursery at Sitagarha as well as from Sabour are sold within the district of Hazaribagh. There are some private nurseries and a nursery of Damodar Valley Corporation which have encouraged papaya cultivation.

The acreage under vegetables is fairly good. The district grows potato on a large scale, but the acreage under other fruits is not so satisfactory. There could be development in the acreage for onion, cauliflower and tomato. The produce, so far, is low to meet the demands of the people of the district.

The area in acres for fruit orchards in Hazaribagh district is given below along with the total area in acres in the State of Bihar :—

		Hazaribagh.	State of Bihar.
Mango	...	200	2,17,517
Litchi	...	25	23,616
Lime	...	10	5,960
Guava	...	10	19,992
Banana	...	300	20,800
Orange	...	41	1,048
Custard apple	...	200	6,400
Jackfruit	...	200	9,960
Papaya	...	100	9,700

There is certainly a great scope for more cultivation of fruit trees in this district.

The area in acres for vegetables in Hazaribagh district is given below along with the total area in acres for the State of Bihar :—

		Hazaribagh.	State of Bihar.
Potato	...	5,200	83,550
Onion	...	685	23,489
Cauliflower	...	523	6,749
Tomato	...	790	5,119
Cabbage	...	63	534
Carrot	...	80	1,004
Turnip	...	160	1,745

Besides these vegetables, more chillies, spinach, beet and other winter vegetables could be grown.

ORGANISATION OF AGRICULTURE DEPARTMENT.

Among the Gazetted Officers there is a District Agricultural Officer at the District headquarters, and there are three Grow-More-Food Officers, one at each subdivisional headquarters of Sadar, Chatra and Giridih subdivisions to supervise the work.

Among the non-gazetted staff, there is a District Engineering Supervisor attached to the office of the District Agricultural Officer to supervise the work of the medium and minor irrigation works. Among the other technically qualified staff who supervise the execution of irrigation schemes, are the Engineering Overseers, one in each subdivision of the district. There are also three work *sarkars* in each subdivision for the same purpose.

Besides them there are eleven Agricultural Inspectors, one each posted in the Intensive Cultivation Blocks and the rest are in charge of the subdivision depots of seeds, implements and manures in each subdivision. Under them are nine *kamdars* in each subdivision.

To carry out the field trials of manurial tables scheme, there are two Field Assistants in each subdivision posted in the interior thanas.

LIVESTOCK.

The comparative statistics of the livestock population of Hazaribagh district from 1940 to 1951 have been shown in the statement on page 198. The figures show an increase in the livestock population but the performance is very poor. A cow of this district has an average yield of not more than 6 or 7 chataks of milk and bullocks and buffaloes are also of small stature. They are not very suitable for hard ploughing. The bulls are of inferior strain. The Animal Husbandry Department has distributed a number of pedigree bulls in the rural areas of the district. *Goshalas* at Pachamba, Giridih, Hazaribagh and Kodarma have also been given some pedigree bulls. An Artificial Insemination Centre has been opened at Hazaribagh. The Animal Husbandry Department is discouraging the use of inferior bulls for breeding purposes by encouraging a mass castration of bull calves. A small poultry farm has been opened at Bokaro. There are also small poultry farms at Hazaribagh and Sitagarha.

VETERINARY AID.

In Hazaribagh district there are 10 Veterinary Institutions out of which there is one District Headquarters Hospital at Hazaribagh

and another in the subdivisional headquarters at Giridih and each of the above hospitals is managed by a Senior Veterinary Assistant Surgeon. There are also Static Veterinary Dispensaries at Hazaribagh, Ramgarh, Kodarma Suraiya, Chatra, Chauparan, Giridih and Dhanwar. There are Field Veterinary Dispensary Centres at Ichak, Jhumra, Chitarpur, Domchanch, Jainagar, Bagodar, Isri Semaria, Unta, Itkhori, Singhrawan, Mahesmunnda, Banarkup, Doranda and Mirzaganj. Veterinary aid is available at these hospitals and dispensaries.

The common contagious diseases are Rinder-pest, Haemorrhagic Septicaemia, Foot and Mouth diseases and Anthrax. At the important fairs at Chatra and Lawalong a large number of cattle are sold. At the time of the fairs veterinary aid is made available.

IRRIGATION.

In the last District Gazetteer of Hazaribagh the following paragraph from the Settlement Reports was quoted :—

“ Except in Gawan, Satgawan and Hunterganj where the riparian villages are irrigated from the Sakri and Leelajan rivers there is no irrigation in the district except from *ahars* and wells. Irrigation from wells is confined to cultivation with the *bari* lands adjacent to the village site and to sugarcane. Irrigation from *ahars* is confined to the lower rice lands which are classed as *dhan-khet* (1) and (2). The total area of land benefited directly by irrigation is 13,872 acres, which represents only 1.07 per cent of the cultivated area. ”

In comparison to this picture in 1917 there has been a great progress in the provision for irrigational facilities in the district.

During the management of Court of Wards of Ramgarh Estate, i.e., from 1913-14 to 1937-38, a large number of new *ahars* or water reservoirs were excavated along with a number of old ones repaired or re-excavated. Almost all the Khalsa villages were provided with one *ahar* and nearly 5,000 acres of *gairmazarua* lands were brought under cultivation. The total expenditure amounted to Rs. 3,74,202 and the entire cost was borne by the Estate.

Since 1935-36 a large number of schemes had been undertaken by the Government for rural water supply. These schemes are not only meant for domestic water supply but also for irrigation purpose. The State took up this work as the landlords neglected maintaining and constructing small irrigation works due to commutation of produce rent into cash and the impending abolition of zamindari.

During the Second World War the schemes for private irrigation remained neglected. But since 1946 when the Congress party resumed office the schemes have again been encouraged. A block grant was made to finance the schemes throughout the province. The provisions of the Bihar Private Irrigation Works Act, 1922 were extended to the district of Hazaribagh by the Bihar Private Irrigation Works Regulation, 1940 (Bihar Regulation I of 1940).

Since 1947-48 minor irrigation works throughout the district were taken up. The programme of minor irrigation drive from April, 1948 consisted of construction and repairs of *bunds*, *ahars*, etc., clearing of *pynes*, water channel, etc., re-excavation of silted *pynes*, tanks and *khantas*, etc.

The schemes completed during the years 1948-49 to 1952-53 are as follows :—

Years.	Schemes taken up.	Schemes completed.	Amount spent in round figures. Rs.
1948-49	497	413	6,19,758
1949-50	551	324	6,90,998
1950-51	857	628	12,49,984
1951-52	706	411	10,40,000
1952-53	308	212	3,78,898

Under 'Grow-More-Food' Campaign the following work was done :—

Scheme.	Number of Schemes.	Cost in round figures. Rs. a. p.
(i) Medium irrigation schemes constructed during 1943-44 to 1952-53.	6	1,30,180 0 0
(ii) Minor irrigation schemes constructed from 1950-51 to 1952-53.	606	2,95,574 11 0
(iii) Wells constructed during 1947-48 to 1952-53.	449	2,32,867 15 0
(iv) Rahat pumps installed during 1947-48 to 1952-53.	112	28,575 15 0
(v) Lift Engine and Pumps supplied during 1949-50 to 1952-53.	90	79,978 4 0
(vi) Open boring work done during 1950-51 and 1952-53.	8	728 4 0

MAJOR IRRIGATION SCHEMES.

The Damodar Valley Corporation has taken up several major schemes. One of the important major schemes constructed under the provisions of the Bihar Public Irrigation and Drainage Works Act, 1947 is Jurga Irrigation Scheme in the district of Hazaribagh. The existing Head Works of the Barki Nadi located near village Jurga which is situated about 13 miles south of Hazaribagh consist of a diversion dam and an irrigational channel taking off at one end. The dam is a very old one. The irrigation channel is rather narrow and the water which can go to the fields is limited by its present discharging capacity which is rather small.

The scheme was taken up in April, 1950 and was completed by June, 1952. A number of villages, namely, Jurga, Arahra, Langatu, Chepa-khurd and Dari Kalan have been benefited by the construction of the dam. The scheme has been constructed at an estimated cost of Rs. 76,827. Some of the other important schemes taken up are Chharwa and Gondo dams. The latter serves to irrigate fields through channels.

AGRICULTURE MARKETING.

Hatias and Arhats.

There are very few organised markets in the district and sales and purchases usually take place in the *hatias* spread over the whole district. These *hatias* are the local markets where the local produce is generally bought and sold.

There are also certain *arhats* in the district where *arhatiyas* or stockists of the urban markets normally make purchases from the adjoining rural markets and build up a stock. Occasionally the *arhatiyas* keep the produce of a big cultivator in their stock and sell the grains charging 3 pies to 6 pies per rupee of the price as their commission.

There is no uniformity in the market charges prevailing over various markets of the district. Market charges prevailing commonly in some important markets of the district are as follows :—

Items of cost.	Payable by seller.	Payable by buyer.
1. Arhat (Commission) ..	12 annas 6 pies per Rs. 100.	12 annas 6 pies per Rs. 100.
2. Dharmada ..	6 pies to 1 anna per Rs. 100.	6 pies to 1 anna per Rs. 100.

Items of cost.	Payable by seller.	Payable by buyer.
3. Gausala ..	6 pies to 1 anna per Rs. 100.	6 pies to 1 anna per Rs. 100.
4. Pathsala (in some cases only).	1 anna per Rs. 100	1 anna per Rs. 100.
5. Handling ..	..	1 anna to 3 annas per bag of 2½ to 2¾ maunds.
6. Packing ..	..	6 pies per bag.
7. Cartage for full cartload	12 annas to 14 annas per mile.	12 annas to 14 annas per mile.
8. Interest per month (in the case of money advanced to seller or credit sale).	12 annas per cent	12 annas per cent.

MARKETS.

Within the district of Hazaribagh, Hazaribagh Chatra, Giridih, Kodarma (Jhumri Telaiya) and Ramgarh are the main markets. The markets of lesser importance are Gola, Peterbar, Isri, Hazaribagh Road, Bagodar and Chauparan.

Hazaribagh Market.

This market is also important for dealing in vegetables, fruits, etc., in addition to foodgrains. About 200 maunds of vegetables are brought for local sale or export every day. This market exports a large quantity of potato to Patna and Gaya due to a local early crop. Later potato is imported from Patna and Bihar. Potatoes, green vegetables like green chillies, peas, beans and tomatoes are exported to the mining areas. About 100 maunds of vegetables are sent to the mining areas every day.

So far as fruit is concerned, it is mostly imported from Patna and Gaya excepting in the case of forest fruits. There is one fruit *arhat* at Hazaribagh which imports 25 per cent fruits from Gaya and 75 per cent from Patna. Retail dealers purchase fruits for retail sales from this *arhat*.

So far cereals are concerned, it is difficult to get locally produced rice in the market after May. After May the rice available in this market is mostly rice imported from Gaya, Madhya Pradesh and Madras. The volume of wheat transacted at Hazaribagh market may be estimated at 15,000 to 20,000 maunds per month of which the supply of the State is responsible for about 35 per cent. Uttar Pradesh and Punjab supply 30 per cent and 25 per cent respectively and

the rest is supplied by Madhya Pradesh and other areas. Hazaribagh market has larger transaction of wheat flour (*atta*) than wheat. Local supply of wheat hardly exceeds two thousand maunds per month.

Among pulses, *masur* and *khesari* are imported from Bihar side and *arhar* and gram are imported from the different markets of the Uttar Pradesh.

Commodities like chillies and turmeric are imported from Patna and Calcutta respectively. Black pepper and other spices are imported from Calcutta. The bulk of the total volume of mustard oil, about 90 per cent, is imported from Uttar Pradesh.

Kodarma (Jhumri Telaiya) Market.

Kodarma mining area is very deficient in respect of foodgrains and other necessities of life. Consequently rice and paddy are imported from Chakradharpur in Singhbhum district. Pulses are imported from Uttar Pradesh and the other States of the Indian Union.

Kodarma railway station has a large outward goods traffic. But the major portion of this traffic relates to mica and mica wastage. Some quantity of bamboo is also sent to other markets.

The total inward traffic for four months at Kodarma railway station goods-shed are given below :—

January, 1955—62,012 maunds.

February, 1955—63,711 maunds.

March, 1955—1,09,637 maunds

April, 1955—88,474 maunds.

About 50 per cent of the inward traffic relate to foodgrains and within the 50 per cent come salt, manure and mineral oils. However, this constitute only 50 per cent of the foodgrains imported in this market from outside. The other 50 per cent is imported by trucks. So calculated this market alone roughly imports about 9 lakh maunds of foodgrains per annum. These imported foodgrains are not re-exported to any other big markets in the district. The stock finds its way to the smaller rural markets.

During the jackfruit season every week about 150 bags of $1\frac{1}{2}$ maund each of jackfruit are exported from this station to upward direction beyond Moghalsarai for about two months. So far other kinds of fruits and vegetables are concerned, they are imported here from Patna, Gaya and Chandannagar. Besides, some vegetables are also imported by bus and truck from Gaya.

On the two *hat* days of the market sheep, goats and cows are also brought for sale in large numbers. The animals are of local breed only.

Giridih Market.

Giridih is mainly important for mica. Next to mica, this market is also important for exporting forest fruits like *aurah*, *bahara* and *harrah* (myrobalan). About 300 maunds of myrobalan are exported from here to other markets. About 75 per cent of the total export goes to Calcutta. Previously about 500 to 600 maunds of these fruits were exported but due to the gradual cutting down of timber the export has decreased.

Livestock products are also exported from this market. Approximately 500 to 600 maunds of hides per month are despatched from Giridih to Calcutta.

So far foodgrains are concerned, Giridih exports a very small quantity of paddy to Bengal. Other commodities, namely, sugar, gram, wheat and pulses are generally imported from outside markets. About 24,000 to 30,000 maunds of pulses are imported every year from Uttar Pradesh and about 25,000 to 30,000 maunds of cereals from the different markets of this State. Foodgrains are not imported here for the purpose of re-exporting but for the purpose of disposal in the same locality.

Potatoes and dry onions to the tune of about 25,000 to 30,000 maunds annually are imported here from Patna by trucks for final disposal. Besides, a large quantity of dry onion is also imported here from Nasik. Potatoes from Itawa (Uttar Pradesh) are also imported here.

So far as green vegetables are concerned besides local supplies a large quantity is brought from Hazaribagh and its adjoining villages. On the weekly *hat* day buffaloes, cows, goats and chickens are brought for sale.

Fairs are also important centres for agriculture marketing. Fairs have been mentioned under the chapter " Directory ".

HAZARIBAGH.

Statement showing livestock population of Hazaribagh district as compared with the livestock population of Bihar.

Year.	Total cattle.	Male cattle.	Female cattle.	Young stock (calves).	Total buffaloes.	Male buffaloes.	Cow buffaloes.	Young stock (buffalo calves).
1	2	3	4	5	6	7	8	9
1920	...	13,426,888	5,204,038	4,622,702	3,539,048	3,179,057	743,935	1,440,097
...	...	757,043	266,503	278,808	217,232	213,702	107,901	53,846
1925	...	13,985,687	5,666,853	4,642,114	6,626,740	3,207,795	755,052	1,475,713
...	...	694,078	276,801	253,274	164,208	170,173	100,777	44,470
1930	...	14,299,434	5,907,309	4,707,460	3,684,365	3,513,681	896,437	1,561,473
...	...	729,374	289,792	253,548	186,039	179,947	123,083	32,165
1940	...	12,564,259	5,386,595	3,749,852	3,427,812	2,891,708	544,435	1,370,044
...	...	708,573	292,243	224,980	191,360	152,413	89,348	31,379
1945	...	11,289,436	5,126,342	3,865,348	2,797,746	2,862,727	677,437	1,279,910
...	...	640,387	282,004	205,259	153,124	161,136	97,160	37,352
1951	...	15,297,476	6,532,019	5,032,291	3,736,166	3,315,875	778,316	1,599,977
...	...	889,336	366,876	312,543	209,917	193,925	47,452	21,468

SOIL CONSERVATION AND ALLIED ACTIVITIES OF DAMODAR VALLEY CORPORATION.

The efforts of Damodar Valley Corporation that have their soil conservation and allied activities throughout the district of Hazaribagh are still in an experimental stage. They have taken up a very important problem that affects the agriculture economics of the district and they have already achieved some concrete results. A brief summary of their work is given below.

The programme of the Soil Conservation Department of the Damodar Valley Corporation includes survey and assessment of erosion and planning and execution of erosion prevention measures in the Valley. Survey has been standardised after consultation with leading soil scientists in India. Soil samples are examined in the laboratory at Hazaribagh. Land Use Planning is done for selected areas for re-settlement on the basis of soil capability maps.

A number of stations have been set up by the Corporation in addition to some stations established by the State Government. Various kinds of experiments, to find out suitable soil conservation practices, such as, contour cultivation, contour strip cropping, etc., in getting maximum output of food crops and fodder without deterioration in the soil, are being conducted in the Deochanda Experiment Station.

In an integrated planning including the conservation of soil and water survey of natural resources, collection of basic data is essential pre-requisites. The only maps available for the area were the 16" to the mile cadastral maps from the Revenue Department which were drawn up during the last Settlement about 30—40 years ago and indicate areas cultivated and uncultivated, forests, etc., at that time and the topographical maps of the Survey of India on the scale 1", $\frac{1}{2}$ " and $\frac{1}{4}$ " to the mile and contours of 50' to 250'. The present distribution of agriculture and forests has considerably changed and more detailed topography in any planning of soil conservation and use of land was essential. So steps were taken to prepare air maps on 6" to the mile sketch with 10' contours with full topographical features of the type necessary.

Soils and Crops.

Detailed survey has been made to make an inventory of the soil resources identifying and classifying the soils into numerous categories on the basis of the inherent physical and chemical study of natural

features such as slopes, drainage, structure and texture, extent of erosion, the degree of plant nutrition available and its depletion, current productive capacity as well as its potential capacity and other characteristics.

Pre-irrigation soil survey of about 7,000 acres has been completed with the object of classifying soil on the basis of profile studies to assess the water requirements, in short to be able to get maximum benefit of irrigation water.

Systematic soil survey of about 34,000 acres has been done. The objective of the survey is to establish the various factors of soil formation and their "series and types". This study is conducted along with erosion and present land use survey.

After studying the soil maps produced on the basis of soil survey data recommendations are made for the proper use of land. Land use planning for an area of 29,901 acres has been completed.

The knowledge gathered in field terracing, gully plugging, fodder production and afforestation is being spread among the villagers from Demonstration Centres so that they can make their lands more productive.

Agronomy and Agrostology.

Research work under this section is conducted in the Research Station established at Deochanda, about 22 miles from Hazaribagh to find out suitable soil conservation practices.

Thirty-nine run-off plots at 3 per cent and 5 per cent slopes for measurements of the run-off of water and silt against the rainfall of each storm under different types of grasses and vegetation at different fertility levels and under different cultivation practices have been constructed. Lysimeter experiments have been set up to measure the amount of nutrients washing down and the amount used up by plants. Two small automatic run-off recording stations have also been set up. Different types of local and imported grasses, shrubs and trees known for providing good cover and comparatively inedible to goats and cows are being tried out at this Experiment Station. The giant star is a very successful find and is now being used for turfing the downstream surface of the earth-dams.

Land Improvement.

This includes mechanical reclamation of lands and follow-up operation by means of green manuring and proper application of fertilizers. Activities of this section also include utilisation of

seasonally submerged lands for agriculture by using receding water of the bigger reservoirs for irrigation. The total area of the reclamation up to date is 6,497 acres of which 4,500 acres have been reclaimed in Telaiya reservoir and the remaining in Maithon and Konar areas. The follow-up treatment on 5,400 acres has been done. Newly reclaimed fields have to be saved from the inroads of rains. The improvement of such fields consists in the provision of spillways and their maintenance, protection and maintenance of fields, bunds and channels. Experiment-cum-demonstration farm for the utilisation of the seasonally submerged land of Tilaiya reservoir has been undertaken on an area of 25 acres. Two more such farms are being established in the area.

Agricultural Chemistry.

A laboratory has been established at Hazaribagh to analyse samples of soils, rocks, fertilizers, manures, plant and water in connection with agricultural experiments, survey of soils, waste land reclamation and afforestation.

Headwaters Engineering Circle.

The following are the functions of the Circle which are connected with general well-being in the Valley and include the projects carried out for the State Government on an agency basis :—

- (i) Erosion control including silt studies of the upper catchment, contour survey and planning, rainfall and discharge measurements in the watershed, flood routing calculations, etc.
- (ii) Studies of technique of bunding, terracing and trenching both in regard to design and execution.
- (iii) Technique of gully control, check-dams, etc.
- (iv) Investigation and design for pondage, diversion banks and waterways.
- (v) Planning of dams and minor irrigation works including irrigation channels, in relation to headwaters control.
- (vi) Hydrological studies in the catchment areas under different conditions of management.

This Circle has completed preliminary investigation of 30 dam sites either for irrigation and/or headwaters control. Detailed designs for six dams have been completed of which two have been executed and completed with irrigation systems and two are in progress. Five small dams for minor irrigation in rehabilitation areas have also been executed.

CHAPTER XII.

LABOUR AND ADIBASI WELFARE.

COAL MINES WELFARE.

During the Second World War, by an Ordinance, dated the 31st January, 1944 (Ordinance VII of 1944), the Coal Mines Labour Welfare Fund was constituted in order to keep up the morale of the workers in the coal industry and to maintain their productive efficiency. The Ordinance was later replaced by the Coal Mines Labour Welfare Fund Act, 1947 (Act XXXII of 1947). With the resources of the Fund a well organised State enterprise for the welfare of workers in all the coal-fields has been set up. The functions are comprehensive and cover medical care and treatment, health measures, housing, adult education, recreational and other facilities, imparting of training in handicrafts to wives and children of miners, etc. The Fund derives its income from the levy of a cess on coal and coke despatched from the collieries at such rate not less than 4 annas and not more than 8 annas per ton as may, from time to time, be fixed by the Central Government. The present rate is 6 annas per ton.

The Fund is administered by the Central Government in consultation with an Advisory Committee consisting of representatives of State and Central Governments, owners of coal mines and workers employed in the industry. The Secretary to the Government of India in the Labour Ministry is the *ex officio* Chairman of the Advisory Committee. A coal-field sub-committee has been formed for each major coal-field in Bihar, West Bengal, Madhya Pradesh, Vindhya Pradesh, Orissa, Assam, Rajasthan, and Hyderabad.

The collieries in the Hazaribagh district employ about 39,000 workers out of about 3,50,000 workers in all the coal-fields in India. Naturally, a considerable portion of the income of the Coal Mines Labour Welfare Fund is spent in the Hazaribagh district.

HEALTH FACILITIES.

Two Regional Hospitals of 50 and 30 beds each at an approximate cost of Rs. 9 lakhs and Rs. 5 lakhs in the Bokaro and Ramgarh-Kanpur Coal-fields, respectively of Hazaribagh district form an important measure. An X-Ray unit has been supplied to the State Railway Colliery Hospital, Giridih at the cost of the Fund on a nominal rent of Rs. 10 per month. The Fund also helps in running the Maternity and Child Welfare Centres under the Hazaribagh Mines Board. The Fund also pays subsidy to colliery owners at the rate of 8 pies per ton

of coal and coke despatched from the colliery to maintain dispensary services at their collieries conforming to the standards prescribed. Its anti-malaria section protects the workers against malaria at an annual cost of Rs. 1,20,000 by spraying D. D. T. and other measures.

HOUSING FACILITIES.

The Fund has started 8 women's welfare centres at Bokaro, Kargali and Giridih at a cost of Rs. 12,43,537. Each house consists of two rooms, a verandah, a back verandah-cum-kitchen, a bath room and an open compound. It pays subsidy of 25 per cent to colliery owners who construct miners' houses conforming to the plans and specifications prescribed by it. Under this scheme 370 houses have already been constructed.

Government have now decided to grant loans to colliery owners for construction of miners' houses to the extent of 37½ per cent of the cost of a house in addition to the subsidy of 25 per cent of the cost of the building but not exceeding Rs. 735. The loan is repayable in 15 years and the rate of interest which is yet to be finalised will not exceed 4½ per cent.

EDUCATIONAL FACILITIES.

The Fund has started 8 women's welfare centres at Bokaro, Kargali I and II, Bhurkunda, Religorha, Sirka, Karkatta, Dewarkhand and Giridih. At these centres elementary education to women and children is imparted. Training in handicraft to workers' wives and female dependants is also given. There are also 8 adult education centres at Bokaro, Kargali I and II, Bhurkunda, Religorha, Sirka, Karkatta and Giridih. The workers are taught in the evenings and there are various facilities for their recreation and educational training. The Fund also maintains 7 Miners' Institutes at the places mentioned above excepting Karkatta and at each Miners' Institute there is a provision of a children's park and a canteen.

RECREATIONAL FACILITIES.

There is plenty of provision for both indoor and outdoor games and other amusements at the adult education and women's welfare centres. The Fund maintains a mobile cinema unit which provides free shows at collieries.

PTT WELFARE FACILITIES.

The Fund is responsible for the administration of the Coal Mines Pithead Bath Rules, 1946, the Mines Creche Rules, 1946 and the Mines Maternity Benefit Act, 1941, as applicable to the coal-fields. Six pithead baths and 11 creches were completed up to the 31st December, 1953.

MICA MINES LABOUR WELFARE FUND.

By Act XXII of 1946, the Government of India decided to constitute a fund to promote the welfare of labour employed in the mica mining industry. The fund is called the Mica Mines Labour Welfare Fund and is collected as a cess on all mica exported from India at the rate of 2½ per cent *ad valorem*.

The Fund is utilised, as under the said Act, to defray—

- (A) the cost of measures for the benefit of labour employed in the mica mining industry directed towards—
 - (i) the improvement of public health and sanitation, the prevention of disease and provision and improvement of medical facilities,
 - (ii) the provision and improvement of water supplies and facilities for washing,
 - (iii) the provision and improvement of educational facilities,
 - (iv) the improvement of standard of living including housing and nutrition, the amelioration of social conditions and the provision of recreational facilities,
 - (v) the provision of transport to and from work;
- (B) the grant to a State Government, a local authority or the owner, Agent or Manager of a mica mine of money in aid of any scheme approved by the Central Government for any purpose for which the Fund may be utilised;
- (C) cost of administration;
- (D) any other expenditure which the Central Government may direct to be defrayed from the Fund.

The Central Government has the power to decide whether any particular expenditure is or is not debitable to the Fund, and its decision is final.

The Central Government has decided that 69.5 per cent of the Fund shall be the share of Bihar for financing welfare measures in Bihar.

The Central Government has also decided to constitute an Advisory Committee to advise it on the various schemes and the term of such a Committee was decided to be three years. The first Advisory Committee was appointed in January, 1948 with the Welfare Commissioner as the Chairman.

The Fund's office has been established at Kodarma, in the district of Hazaribagh.

In drawing up the schemes for the welfare of mica miners in Bihar, there were certain genuine difficulties. Mica being an uncertain deposit, it was necessary to carefully examine the location of each activity, so that money spent on the scheme may not be wasted in a few years' time, in case mines in that area are closed down. The estimates of expenditure also had to be conservative, because of the same difficulty. Due to the absence of suitable road communications in the hilly and jungle area where mica mines are mostly situated, it was neither possible to have a fleet of Mobile Welfare Units to serve the shifting nature of population, due to closing of old mines and starting of new ones. Thus, the welfare activities had to be concentrated in areas like Dhab, Dhorakola, Debour and Gawan, which were the important mining centres and where there was certainty of mining labour staying and working in near about mines. But even in these areas, no suitable houses could be available on hire or otherwise to start the Fund's activities straightway. Constructing the Fund's own buildings for activities was a matter of time, since the land had to be acquired, building materials had to be collected and the necessary technical staff to be appointed.

For these difficulties the Chairman of the Advisory Committee placed before the first meeting of the Committee the resolution : " The only amenity which can advantageously be introduced at present is the provision of a mobile shop for making essential consumer's goods available to the miners and this should be done." The resolution was accepted.

The Fund's office at Kodarma was established in November, 1947 and the mobile shop started functioning from July, 1948. Gradually the other welfare activities of the Fund were extended to important mining areas by taking on rent or otherwise such buildings as could be available and the Fund's staff have been putting up with the difficulties of accommodation and communications and doing their best to serve the interest of labour to the maximum. The Fund has also appointed a technical staff and has acquired lands for constructing its own buildings for efficiently organising its schemes and its construction work is also in progress.

The details in respect of the schemes as also the contemplated future programme of the Fund are given below.

Reservation of beds at the Kodarma Hospital.—Pending the setting up of the Fund's own Central Hospital, the Fund had reserved two beds for the mica miners at the Kodarma Hospital at a recurring cost of Rs. 13,000. Three thousand mining cases are treated every year in this Hospital.

X-Ray Plant.—The Fund had also decided to place in X-Ray Plant at the Kodarma Hospital until such time as its own Central Hospital was set up.

The Fund's Central Hospital.—The Fund has acquired an area of 38.43 acres at Karma, about two miles from the Kodarma railway station on Ranchi-Patna road and a 30-bedded Central Hospital with a separate 4-bedded T. B. Ward has been constructed. Expert medical and surgical facilities are available free of cost to mining labour at this Hospital. This is a unique institution in the district of Hazaribagh. The Hospital has started functioning since 1954.

Static Dispensaries.—The Fund has established three static dispensaries at Dhorakola, Dhab and Ganpatbagi. All the three places are very important mica mining centres in the district of Hazaribagh. The dispensaries treat 2,000 to 3,000 workers annually, free of cost.

The Fund is constructing its own dispensary buildings with two emergency beds, at the above places. Serious cases are to be transferred to the Fund's Central Hospital at Karma. In the near future, the Fund will establish three more static dispensaries in the district.

Mobile Medical Units.—The Fund has two Mobile Medical Units, one at Kodarma and the other at Dhorakola. The Units visit fixed patients attending centres in mica mines every week and between them cover the entire Kodarma Reserve Forest area.

Government have also sanctioned a Mobile Medical Unit for visiting mines in the Gawan zone. The Unit will be stationed at Ganpatbagi, and the dispensary staff will work on the Unit during afternoon hours.

Maternity and Child Welfare Centres.—The Fund has planned to establish nine Maternity and Child Welfare Centres in the mica field and is acquiring lands for putting up suitable buildings for the Centres.

Anti-malaria Scheme.—Since the mica mines are mostly situated in the forest areas, malaria is a great menace to mining labour. However, the Fund has been distributing a 3 g.m. Paludrine tablet to each worker every week and this has checked the menace to a very appreciable degree.

Government of India have also sanctioned a scheme for spraying the workers' dwellings with Gammoxine and this will exercise further control on malaria incidence in the mica mining areas.

Mobile Cinema.—In order to provide recreation to the workers employed in mica mines, the Fund maintains a self-contained Mobile Cinema Unit. The cinema visits all important mica mining areas of the district and exhibits regular full-length 35 m.m. films.

Multi-purpose Centres.—The Fund has decided to establish nine Multi-purpose Centres in the mica field for conducting Adult Education and Women's Welfare activities. The Centres are to be located near workers' dwellings so that they can participate in the activities during their leisure. These Centres will educate the complete family children, women and adults and completely reorganize the community life of the miners. Several of such Centres have started functioning.

One Multi-purpose Centre has already been set up in a hired building at Debour, about 12 miles from Kodarma on Ranchi-Patna Road. More Centres could not be set up immediately as suitable buildings were not available on rent in the mica field.

The staff at the Centre consists of an Adult Education Instructor, a Field Worker (woman), a Sevika (a woman helper), an Aya (a woman attendant) and an Attendant-cum-Watchman.

The Centres provide for education and instruction in 3 R's. Sports and Recreation for the adults, women and the children. Sewing and knitting classes are held for the women. There are ample provisions for outdoor and indoor games for the children. The Fund has also schemes for the provision of ambulance van, blind relief camp, safety propaganda and periodical competitive sports with prizes.

Provision of Drinking Water.—In order to improve the supply of wholesome drinking water in the area the Fund has sunk three wells at Khalakatambi, Dhorakola and Saphā.

The Fund has also decided to grant a subsidy upto 75 per cent of their cost or Rs. 7,500, whichever is less, to mine owners sinking their own wells at the mines.

Housing Scheme.—In order to improve the living conditions of mica miners, the Fund has decided to give a subsidy upto 20 per cent of the cost to mine owners building houses of prescribed standards at the mines.

The following standards are being prescribed for the purposes of this scheme :—

A room 12 ft. × 10 ft. with a 6 ft. verandah on either side and a kitchen in the back verandah should be provided for either two single workers or for one worker with family.

Flooring—The room and verandah should have cement floor.

Walls—Walls should be made of burnt bricks in mud mortar with cement plaster.

Roofing—The roof should consist of corrugated iron sheet with country tiles or asbestos cement sheets.

Height—Height in the centre should be 11 ft. and towards the edges in the verandah 7 ft.

ABORIGINAL WELFARE.

The socio-economic condition of the aborigines in Hazaribagh district is far from satisfactory, chiefly due to their very limited income and social habits. The progress of education among the aborigines has been rather poor. The little help which the aborigines received in matters of education and other economic welfare measures before Independence was achieved in 1947 was due to the Christian Missionaries and the progress was more or less confined among such aborigines who had become Christians. Certain Tenancy Laws had been passed during the British regime to save the aborigines from the *mahajans* and other speculators.

Since 1947 aboriginal welfare is a distinct State Department in the district. There is now an Aboriginal Welfare Officer for the district of Hazaribagh and 32 Thana Welfare Officers. The Aboriginal Welfare Officer is of the rank of a Deputy Collector. Each Thana Welfare Officer has been put in charge of a group of 20 villages and he has to work in the midst of the aborigines as their friend, philosopher and guide. His main function is to ameliorate their economic condition and to save them from the tyranny of the rich and the *mahajans* or other speculators.

The *mahajans* had their grip on the economic life of the aborigines. By nature the aborigines are care-free and not thrifty. They would run to the *mahajans*, whenever they are in financial stringency and the *mahajans* would willingly give loans at a very high rate of interest. Once an aborigine is forced to take a loan from the *mahajan* his indebtedness would become almost a permanent feature. To give relief the Money Lenders Act was straightened up and provided a particular rate of interest. Thirty-two grain *golas* have been opened in Hazaribagh district and each grain *gola* has been put under the charge of a Thana Welfare Officer. Paddy is advanced to the aborigines from the grain *golas* at the time of sowing paddy and the dues are realised from them at the time of harvest with 25 per cent extra as interest and with no compound interest on the arrears.

Facilities for minor irrigation have been extended to the aboriginal areas by the Revenue Officials with the full help and co-operation of the Thana Welfare Officers. These Thana Welfare Officers bring the grievances of the aboriginals of their areas to the notice of the proper authorities and get their grievances redressed. They also help the needy ones in getting agricultural loans and land improvement loans so that they may cultivate more lands and use improved agricultural implements.

Village Panchayats have been formed by the Thana Welfare Officers in their areas. These Panchayats settle the village disputes as far as possible.

So far as education facilities are concerned scholarships are given from year to year to a number of aboriginal students. The Thana Welfare Officers have to keep in touch with the progress of the aboriginal students and schools.

As medical help is either not accessible or could only be had at a great cost the Thana Welfare Officers have been given a medicine box of both Homeopathic and Allopathic medicines and they are expected to administer medicines in the easily diagnosed cases.

Primary schools with many aboriginal students are functioning under the auspices of the Adimjati Sewa Mandal in this district with Government aid. Primary schools with some students are also running under the control of the District Education Council. High schools at Kasmar, Gola and Chatra serve the Adibasi boys. One high school is functioning under the charge of the Adimjati Sewa Mandal at Peterbar. Since the abolition of the District Education Council in 1956, the Education Planning Committee has taken up its work.

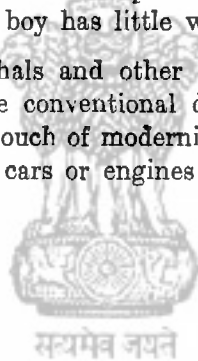
Buildings for hostels for Adibasi boys have been completed at Gola, Peterbar and Mandu. Besides there are two other hostels for Adibasi boys in hired buildings at Ramgarh and Kasmar. Better medical facilities have been brought within the reach of the Adibasis.

It is not easy to estimate the progress of Social Welfare in the rural areas and particularly among the tribes. But there is no doubt that there are now better facilities for education, health and agriculture. There has been, no doubt, a marked increase in literacy among the aboriginals. The second advance worthy of note is that their economic standard has risen. It appears that the work in the industrial centres is responsible for this. In most of the villages a percentage of the young men work away from their homes and send money to their

relatives in the villages. Many of the Adibasis did war service and had put their bonuses to good account in buying land or building better houses. There has been a steady flow of new aboriginal settlers from the Ranchi district into the Hazaribagh district. Most of them are Mundas. The Adibasis live a cleaner life than before and every Adibasi home has got a few good utensils, cattle or poultry and at least a small bit of land.

There is no doubt that with the impact of the present trends there has been a tendency for the family life and tribal customs to disintegrate. In the Christian villages it is due to the fact that most of the young wage-earners have left their village homes and are living in urban surroundings and often under conditions where no sanctions of their ordinary tribal life can be applied. In the non-Christian villages also this drift is seen. But the drift is not an un-mixed blessing. It holds back the advance of use of improved and modern methods in agriculture. The educated boy has little wish to work on the land.

The huts of the Santhals and other Adibasis are always neat structures and usually have conventional designs painted on the walls of the houses. There is a touch of modernism slowly coming in because replicas of cycles or motor cars or engines are now being made on the walls of the Adibasis' huts.



CHAPTER XIII.

NATURAL CALAMITIES.

DISTRESS OF 1874, 1897 AND 1908.

In spite of the recent partial industrialisation in Hazaribagh district, the activities of Damodar Valley Corporation, the exploitation of the mineral and forest resources, the economy of the district mainly remains agricultural as it was when the last District Gazetteer was published in 1917. Mica, coal and other minerals provide occupation for a comparatively small percentage of the population although the mineral resources of this district are unique. Details of agricultural statistics will be found in the chapter on Agriculture, Livestock and Irrigation. For purposes of this chapter it will be adequate to mention that since Lister wrote in the last District Gazetteer in 1917 that agriculture depends in Hazaribagh district absolutely on the rainfall there have been little changes.

After a survey of the resources of the cultivating and landless classes Lister mentioned in the last District Gazetteer as follows :—

“ This survey of the resources of the cultivating and landless classes discloses an excessive dependence in all but a few areas on the outturn of the crop of rice grown on the terraced lands. In the comparatively small valleys of the Lilajan and Sakri rivers the *rabi* crops are perhaps of more importance than the rice; and the mica industry affords protection to the remainder of Gawan and to north Kodarma; but the rest of the district must have recourse to temporary emigration in case the rice crop fails and this step is practically restricted to male adults. Irrigation is confined to about 14,000 acres and the outturn of the terraced lands is annually dependent on the amount and distribution of the rains. These lands are either sown broadcast, or are planted from seed grown in nurseries. The former lands should, if possible, be ploughed in January or February; but the latter can wait until they are wet or even submerged, immediately before transplantation. With the rising of Rohan towards the end of May the broadcast rice must be sown in the terraces and the nurseries must be planted and if there is rain the maize and *marua* are also sown. Light rains and an early and light monsoon favour these latter and other *bhadai* crops and a heavy downpour is not needed till the middle of July or even the end of that month. When it arrives transplantation of the *marua* and rice seedlings is pushed on and as the plants are weak from that operation they are in special need of good rain for a few days after. Right through September rain should fall at such intervals and in such quantities that the terraces will remain submerged, yet not so

heavily and continuously as to break the *ails* or prevent the pollination of the *bhadai* crops and later on their harvesting. If, after this, the Hathiya rains fall in the first week in October and then cease, the maize and *marua* and other *bhadai* crops will be good, the rice crop will be full and the soil will be fit to cultivate for the sowing of the *rabi* crops.

“ From this perfect programme the departure which causes most serious loss is the postponement of transplantation till the end of August and the cessation of the rains early in September. A break at that precise stage cannot be remedied for the third class rice by subsequent rainfall. The *bhadai* crops, on the other hand, require light but fairly frequent rain in Rohan, sowings are delayed and heavy rain in July will cause very great loss. A poor *bhadai* harvest is usually due to excessive rain in July.

“ The *rabi* crops are sown in October or early November and rain continued till the end of October prevents the proper cultivation of the soil and sowings cannot be made in sodden ground. They require one or two showers in the interval between the blade and the ear, but rain during flowering is very injurious.”

The vagaries of rainfall have caused in the past distress in the district. In the last District Gazetteer there is mention of three years of distress, namely, 1874, 1897 and 1908. Regarding the distress of 1874 the following was mentioned in the last District Gazetteer :—

“ The information about the distress of 1874 is meagre. The rainfall of 1873 was as follows :—

April.	May.	June.	July.	August.	September.	October.
0.50	0.46	3.35	22.80	17.85	9.06	0.0

In the absence of more definite information about the distribution of the rain weekly periods it is impossible to explain what happened. The *bhadai* crops must have failed, as they would be drowned out in July. The outturn is said to have been 4 annas. The rice crop is said to have been 8 annas, and this indicates an early cessation in September. *Rabi* was from 3 to 8 annas. The *mahua* crop was very good in 1874. No gratuitous relief was given. The highest number of workers was 16,303. The cash expenditure locally was Rs. 1,69,210 and in addition 1,261 tons of grain were imported at a cost of Rs. 1,70,235.”

About the distress of 1897 the following was mentioned in the last Gazetteer :—

“The rainfall at the Sadar station in 1896-97 was as follows :—

April.	May.	June.	July.	August.	September.	October.	November.
.45	1.80	11.00	13.12	9.39	8.10	0	0.25
		December.	January.	February.	March.		
		0.59	0.28	2.16	2.01		

The excessive rain in June was harmful to the *bhadai* crops and the rather heavy rain in July increased the damage. The rice crop was injured by the insufficient fall in August and the cessation of the monsoon by the middle of September made a poor outturn inevitable and as it followed on a 10-anna crop in the previous year, local stocks of rice were very deficient. The absence of rain in October prevented the sowing of the *rabi* crop and storms in March severely damaged the *mahua*. Finally the lac crop was poor and prices unduly low. The tracts most seriously affected were Chauparan, Barhi, Bagodar, Kodarma, Gumia, Mandu and Hazaribagh. The price of rice rose to 6 seers a rupee against a normal price of 17 seers. The maximum number of workers was 2,152 and of gratuitous recipients 7,815 and expenditure was Rs. 73,000 from Government funds and Rs. 39,000 from charitable funds. Rs. 51,000 were advanced as *taccavi* loans. The birth and death rates were both adversely affected to a serious extent.”

The famine and scarcity of 1908 was particularly bad. The following paragraph is quoted from the last District Gazetteer regarding the distress of 1908 :—

“The rainfall in 1908 was as follows :—

April.	May.	June.	July.	August.	September.	October.
.66	.60	14.14	6.35	18.36	9.16	Nil.

It will be obvious that transplantation was very late and as the rains stopped abruptly after the first week of September the plants in their new soil never had a chance of thriving except in the lowest fields. The *bhadai* crops were drowned by the excessive rain of June and the *rabi* crops could not be sown for lack of moisture. The *mahua* crop did badly and whilst the local outturn of lac was poor prices were very low. The worst tracts were thanas Barkagaon, Simaria, Chatra and Hazaribagh. The maximum number of test-works was about 1,000 and on gratuitous relief 5,000. Expenditure from public funds was : works—Rs. 10,400, food—Rs. 39,800 and *taccavi* loans—Rs. 3,53,800. That in spite of these figures there was very real distress is proved by

the vital statistics. The average death rate is 32 per 1,000 and the average birth rate is 47 per 1,000. In 1908 these rates were 53.8 and 37.1 respectively or, in other words, an average gain of 15 per thousand became a loss of 16.7 per thousand and that calculated on the population not merely of the affected tracts, but of the entire district. The diminution in the birth rate naturally continued into 1909, when it was 39.1 per thousand. Six people per thousand died of cholera."

For a comparative study of the later periods of economic distress the following paragraphs from Lister's Gazetteer under the heading "Present conditions" (1917) are reproduced:—

"Since 1908 communications have been improved in the south of the district by the opening of the Ramgarh-Bokaro Railway, the building of the Damodar bridge at Ramgarh and the improvement of the Gola-Jhalda road. Between Chatra and the Railway the road has now only one gap unbridged and is metalled throughout. No tract is now liable to serious danger of isolation for more than a day or two. Local prices of food-grains are no longer determined by purely local conditions. Temporary emigration is on the increase and local scarcity will doubtless swell its volume even more than on past occasions, with a consequent difficulty in gauging distress by test-works. Probably *taccavi* loans coupled with a small amount of gratuitous relief will be sufficient to cope with the modified scarcity which alone is to be expected. The period of distribution should, however, be carefully selected. For buying plough bullocks February is the latest opportunity and for seed the end of April. The cattle must do much of their ploughing, if possible, in February, and most of the seed must be sown in Rohan (May-June).

"Elaborate programmes of famine relief works are in readiness; but it is improbable that they will ever be used. Adult male labour will wish to seek the coal-fields and private employment on productive work of that character is obviously preferable to State-managed employment on *bandhs* and roads.

"The physical configuration of Hazaribagh confers on the district immunity from floods, but makes it a source of danger to its neighbours. Excessive rain in Gawan in September, 1896, caused a flood in the Nawada subdivision of Gaya in which 34 people were drowned and 2,000 houses destroyed, while much rich land was made permanently useless by a heavy deposit of sand. Similarly, on the 8th of August, 1913, heavy rain fell in the Damodar basin and the rain gauge at Ramgarh recorded 6.12 inches. The flood exceeded all previous experiences and the design of the bridge then under construction was revised. Beyond the district this flood caused extensive

damage in the coal-fields and lowered down its course. An arrangement has since been made for giving timely information direct from Ramgarh by telegram to the Collector of Bankura in case five inches are measured in one day or eight in forty-eight hours, or if the water rises to a black band on the seventh pier 16 feet above the bed of the river.

In respect of other natural calamities the district is comparatively immune. Locusts are not unknown, but they have so far done little damage. Earthquakes have been felt but buildings have not been destroyed and even forest fires are small and unimportant."

The later history of Natural Calamities also follows the same trend of either want of or excess of the required quantity of rain excepting in the years following the War when there was an all-round economic distress due to wider reasons.

There was failure of rain in July and August in 1915-16 for which transplantation could not be made in some places in proper time while in some other areas no transplantation could be made at all. The yield of *bhadai* crops was said to be about twelve annas while winter rice yielded about eleven annas output. The paddy outturn on the *don* 3 class of lands was very poor and in some areas it was a complete failure. The same features were observed in the following year 1916-17 and on the whole there were twelve-anna crops. This year the prevailing price of almost all the necessities of life, specially of salt, sugar and rice, was rather high.

But the year 1918-19 was worse. There was a long break in the rains in July followed by heavy rains in August as a result of which *bhadai* crop was a partial failure. To make matters worse there was a complete cessation of the rains about the middle of September causing a failure of the paddy crop. The poorer classes usually fall back on *mahua* crop for the month of scarcity but in this year the *mahua* crop also had a failure owing to cloud, rains and hail-storm in the preceding months of March and April. It was estimated that there was only eight-anna yield of *mahua* crop. The prices rose abnormally and there was an acute economic distress particularly in the areas Tandwa, Peterbar and Kharagdiha.

The prices of cloth and kerosene oil rose abnormally and Government had to intervene. The local Marwaris are reported to have raised the prices of rice and other food-stuffs. To make matters worse there was a large number of deaths. The virulent epidemic of influenza was followed by a smaller outbreak of pneumonia in the months of September and October and took a heavy toll of life. The epidemics were so widely prevalent that the best efforts of the District Board and the

Municipalities could only touch the fringe of the problem. Cholera was also bad in Chatra Subdivision and there were the usual cases of malaria and small-pox.

The acute economic distress was met by the Government by the provision of the construction of several new roads in the reserved forests. In the Kodarma estate the people found employment in the mica factories. Test-works were not opened as there was no indication that they would be successful. Land improvement loans and *taccavi* loans were widely distributed. Steps were also taken to stimulate public charity and circles were formed for the distribution of gratuitous relief through non-official agency. These steps were calculated to avoid widespread economic distress.

In the following year (1919-20) conditions did not improve. Owing to lower produce of the crops, high prices, outbreak of cholera the people suffered and Government continued the distribution of land improvement loans and *taccavi* loans.

EARTHQUAKE OF 1934.

There were no abnormal natural calamities in the years following 1920. The Great Bihar Earthquake of 1934 was felt in the different parts of the district. The earthquake, however, did not have any disastrous effect in this district as in some other parts of Bihar. After an interval of semi-normal years irregular rainfall was again responsible for a certain amount of economic distress in the years 1935—38. There was a failure of both winter and *rabi* crops. The yield of sugarcane crops was also below normal.

In 1943 there was a cholera epidemic taking the toll of 3,633 lives. The epidemic broke out suddenly and in spite of prompt measures there was a heavy casualty.

The rain-god gave a cruel deal to Hazaribagh district in 1946 when there was an unprecedented rainfall as a result of which the river Barakar was in spate. The Barakar bridge on the Grand Trunk Road near Barhi collapsed and about a dozen villages situated by the side of the river Barakar were submerged under water. Gratuitous relief had to be distributed by the Government and by some local private organisation to the flood-stricken people of the areas and loans were also advanced for the construction of their houses.

If rains created havoc in 1946 hail-storm did so in 1949. A severe hail-storm damaged heavily the standing paddy crop which was ripe for harvest in part of Chatra and Sadar subdivisions of the district. The worst affected areas consisted of Pratappur, Hunterganj, part of

Chatra, Mandu, Ramgarh and a portion of Barkagaon within Sadar subdivision.

The year 1951-52 showed an unprecedented failure of paddy crop in the whole of Chatra subdivision and Gawan and Satgawan in Giridih subdivision due to drought and failure of Hathiya rains. Government in their notification no. D/I-1004/51-4045-R., dated the 22nd May, 1951, declared Hazaribagh as scarcity-stricken area. Relief measures on an unprecedented scale were undertaken and the people had to be provided with both work and food. Government in the Supply and Price Control Department arranged for the distribution of food-grains through fair price shops which were started everywhere. Government also recognised that in addition to the sale of food-grains gratuitous relief was also necessary and relief works were undertaken on a large scale to save the indigent and the disabled people from starvation.

The following allotments were made to this district to combat the scarcity conditions :—

- (1) Gratuitous relief—Rs. 50,000.
- (2) Salaries and Establishment—Rs. 2,500.
- (3) Relief work involving light manual labour—Rs. 50,000.
- (4) Hard manual labour—Rs. 2,00,000.

Regarding the high price for rice it may be mentioned that the price of rice in September and October, 1950 had gone up to Rs. 32 a maund. In the predominantly paddy growing areas of Peterbar and Jaridih, it was available at the rate of Rs. 20 a maund till the month of March, 1951. As the dry months drew near, the price level had an upward tendency. In the Hazaribagh town the price had gone up from Rs. 26 a maund to Rs. 30 a maund again. The off-take of food-grains (in maunds) during the year 1951-52 is detailed below :—

Month.	Sadar.	Giridih.	Chatra.	Total.
April, 1951	8,587	1,489	688	10,734
May, 1951	21,392	4,079	5,519	30,990
June, 1951	60,691	13,210	18,129	92,030
July, 1951	66,022	25,421	23,238	1,14,681
August, 1951	40,130	12,009	18,139	70,284
September, 1951	14,054	7,960	8,128	30,142
October, 1951	10,535	3,880	4,575	18,990
November, 1951	12,570	3,133	2,432	18,135
December, 1951	13,977	6,900	3,630	24,507
January, 1952	7,138	2,260	2,459	11,857
February, 1952	5,227	3,365	2,392	10,984
March, 1952	7,479	1,157	1,185	9,821
Total	2,67,808	84,863	90,484	4,43,155

The distribution of food-grains either through fair price shops or gratuitous relief in 1951-52 in the district in general and in the deficit pockets in particular relieved the scarcity conditions. The harvest of *bhādai* crops which was good saw to the decline in the demand for Government stock of food-grains.

Gratuitous relief was distributed in Chatra subdivision in kind through ration cards drawn from the fair price shops. Giridih subdivision did not require gratuitous relief. A sum of Rs. 13,042 was spent out of the grant placed at the disposal of the District Officer under this head.

Although provision was made for relief work involving light manual labour no amount was spent under this head as the Subdivisional Officer, Chatra, reported that the persons entitled to receive this kind of relief did not come forward for the purpose. Hence the entire allotment was surrendered to Government.

Out of the grant of Rs. 2,00,000 for hard manual labour sanctioned by the Revenue Department a sum of Rs. 85,500 was allotted to the Divisional Forest Officer, Hazaribagh and a sum of Rs. 21,000 was allotted to the Divisional Forest Officer, Giridih, for construction of roads within the scarcity pockets and houses by the Forest Department as a relief measure. A sum of Rs. 75,526-6-0 was only spent under this head.

Besides this a sum of Rs. 1,50,000 was sanctioned by the Local Self-Government Department for repairs of roads through the agency of the District Board as a relief measure. Repairs of 14 roads were sanctioned as a relief measure out of the grant of Rs. 1,50,000 for execution of relief works in the scarcity areas. The District Board, Hazaribagh, took up repairs of five roads in the worst affected areas of Chatra subdivision of the district, namely, (1) Kunda-Pratappur road, (2) Pratappur-Pandeyapura and Pandeyapura-Huntergunj road, (3) Jori-Pratappur road, (4) Simaria-Lawalong road and (5) Lawalong-Chako road on the border of the district. A sum of Rs. 23,308 was spent on these roads. Sufficient labourers were not forthcoming for these projects with the result that the progress of repair of roads undertaken by the District Board did not make much headway. Besides the execution of the roads by the Forest Department and the District Board, the Public Works Department in Chatra subdivision, where the distress was acute undertook the repairs of Dhobi-Chandwara road and employed 3,000 to 4,000 labourers a day over this work. The major portion of the labourers engaged on this road came from the neighbouring district of Gaya.

The execution of minor irrigation schemes was also intensified during the year with a view to give employment to the distressed labourers of the district. 706 minor irrigation schemes were taken up during the year 1951-52 for execution out of an allotment of Rs. 10,00,000 sanctioned by the Revenue Department. These schemes were executed through Village Panchayats under a headman. In a very few cases contractors, however, had to be engaged as other suitable agency was not available. The total amount spent was Rs. 9,75,239-10-0. Besides the minor irrigation schemes, medium irrigation projects at Dahuri and at Nagri were also taken up and executed through the agency of the District Agriculture Officer, Hazaribagh. The former lies in Chatra subdivision while the latter is situated in Giridih subdivision.

Agriculturists' loans and land improvement loans were also distributed, particularly in the worst affected areas. 23,734 persons received agriculturists' loans and Rs. 13,14,010 was distributed. A sum of about Rs. 82,109 also was distributed as land improvement loans to 301 persons.

Fortunately the district was comparatively free from any epidemic in this year 1951-52. A large quantity of multi-vitamin tablets were distributed throughout the district. Some medicine chests were also distributed as a measure of protection. A large quantity of skimmed milk was procured and distributed through 44 centres in Sadar subdivision, 34 in Chatra subdivision and 14 in Giridih subdivision to children and expectant mothers. If the year 1951-52 was bad, unfortunately the year 1952-53 was worse for Hazaribagh district. There was a complete failure of Hathiya rains with the inevitable result of a failure of the crops throughout the district. At first Government had included only the Chatra subdivision in the list of scarcity pockets. But on the representation of the local authorities, after the District Relief Advisory Committee had reviewed the situation, a number of other police-stations were also included in the list of scarcity pockets. There was frightful failure of crops in Eastern Dhanwar, Northern Jamua, Deori, Ganwan, Satgawan, Bengabad and western Nawadih police-stations of Giridih subdivision. There was also a total failure of paddy crop in a large number of villages under Barkagaon police-station in the Sadar subdivision while the produce in the other part of the Sadar subdivision was to the extent of 50 per cent of the normal. Giridih subdivision was further hard hit during the year 1952-53 because of a slump in the mica trade. So, the three subdivisions of the district, namely, Sadar, Giridih and Chatra, had acute distress in the year 1952-53.

The purchasing power of the people had gone considerably down on account of continued drought, high prices of the food-stuffs and the slump in mica trade. The lower purchasing power of the people was clearly shown when in spite of relaxation of certain rules in the distribution of food-grains the off-take in the fair price shops went down considerably. Apart from the lower purchasing power of the people the open market had other cheaper food-grains like maize, *marua* and the Government food-grains were selling at an enhanced price owing to various reasons. A percentage of the classes not usually consuming maize or *marua* normally had to fall back on them. The ruling prices of rice and wheat in the three subdivisions were as follows :—

		Rice.		Wheat.
Sadar ..	..	Rs. 27 to 32	..	Rs. 24
Giridih..	..	Rs. 27 to 31	..	Rs. 23 to 25
Chatra ..	..	Rs. 26 to 30	..	Rs. 25 to 26

Government machinery for gratuitous relief, distribution of loans, provision of projects involving heavy manual labour in the shape of repairs of forest roads, buildings, etc., were put into operation. So far as gratuitous relief is concerned there was a sharp contrast this year to the comparative apathy of the people in 1951-52 to receive gratuitous relief. A sum of Rs. 1,00,000 was allotted by Government for this purpose. There was also a heavy demand for agricultural loans and land improvement loans. Up to the 31st December, 1952, a sum of Rs. 7,13,520 as agricultural loan and Rs. 44,535 as land improvement loan had been distributed.

Repairs of forest roads and buildings within the scarcity pockets, as was done in the previous years, were also undertaken by the Forest Department to provide employment to able-bodied labourers. Some portion of the allotment was also diverted for desilting of wells. A sum of Rs. 1,18,201-15-0 appears to have been spent on these projects up to the 31st December, 1952. Government in the Local Self-Government Department had sanctioned a grant of Rs. 1,50,000 for giving relief to the distressed people within the scarcity areas of the district. The District Board spent the entire sum on the repairs of a large number of roads which gave employment to quite a number of able-bodied men.

Fortunately there was no epidemic and even the incidence of cholera and small-pox was very small in this year. Despite the scarcity conditions prevailing, the level of public health was fairly satisfactory.

There was a slight damage to the early paddy crop during 1952-53 by *gundhi* bug. Necessary steps were quickly taken by the Agriculture Department to meet the invasion by *gundhi* bug which was not very common.

Since 1917, when the last District Gazetteer was published, there has been a great development in communications, particularly, roads-ways. Better roads have been provided and the interior has been made more accessible by the running of daily passenger buses and private or public carriers. New townships like Ramgarh, Bokaro, Tilaiya, etc., have grown up. The Damodar Valley Corporation have thrown dams across some rivers at various points and a thermal station has been opened at Bokaro. Electricity has been made available to the country side. There is not much difficulty for getting work as a day labourer. The incidence of emigration has naturally fallen. Changes in the industrial zone in the district have come in. While the turnover in lac and catechu has fallen there has been a bigger output in coal, mica and timber business. Hazaribagh district is no longer an isolated unit.

It may not be wise to make a prophecy particularly in an area where rainfall determines the economic condition of the people. But it may be said that the rapid industrialisation that is going on within the district of Hazaribagh in various areas, the wholesome steps taken by the State for permanent measures towards the amelioration of the condition of the people and the general trends of events all indicate a definite turn for a better economic condition of the people and lesser chances for natural calamities in the district of Hazaribagh.

CHAPTER XIV.

ECONOMIC CONDITION OF THE PEOPLE.

POPULATION AND DENSITY.

The total population of the district according to 1951 Census is 19,37,210 out of which 9,81,264 are males and 9,55,946 are females. The corresponding figures for the year 1941 were 17,51,339 (total population), 8,79,543 (males) and 8,71,796 (females). The district has an area of 7,016 square miles, and the density per square mile of the district as per 1951 Census figure comes to 277. The density per square mile according to 1941 Census was only 250. It will thus appear that the pressure on land has increased during the course of the decade. The average density of population per square mile over the Chotanagpur plateau is 327. On comparison of the density figures of the different districts of the State, it appears that Hazaribagh has the lowest density, except Palamau and Ranchi, where the density is 200 and 260 per square mile respectively. The density does not appear to be high calculated on the total area, including mountains and ravines, which are not fit for either agricultural or industrial exploitation. But if only the cultivable lands and the areas capable of industrial development are taken into consideration, and this is the only basis for assessing the economic capability of a region, it will be found that Hazaribagh, as also the other Chotanagpur districts, is over-populated. One may say that in that sense the Chotanagpur districts are more over-populated than the districts in the plains of Bihar. The cultivable area in the plateau region as a whole is below 35 per cent of the total area, while it is well over 65 per cent in the plain area.

CLASSIFICATION OF AREAS.

The following is a statement showing the classification of areas (in thousands of acres) in Hazaribagh district during 1950-51 :—

Forest	...	...	...	...	21.62
Net available for cultivation	...	...	...	...	4.18
Other uncultivable land excluding current fallow	...	...	...	...	4.09
Current fallow	...	...	...	...	5.33
Net area sown	...	...	...	...	9.49
Total area of the district	...	...	...	...	44.71*
<i>Bhadai</i> crops	...	...	...	...	2.85

*The discrepancy between total area in square mile and total area in acre of the district is due to the difference between the cadastrally surveyed areas and the area reported by the Surveyor-General in the whole State of Bihar. There is difference of 221 thousand acres in Bihar, so this led to discrepancy in the figures of Hazaribagh also.

<i>Aghani</i> crops	...	...	...	8,16
<i>Rabi</i> crops	...	...	...	92
Fruits	...	...	...	3
Potato	...	...	...	10
Vegetables, including root crops	...	...	...	7
Total area sown	...	...	...	12,13
Area sown more than once	...	...	...	2,64

It will appear that out of a total area of 44,71,000 acres, the area covered by forests alone is 21,62,000 acres. The total area sown is actually much less than the area covered by the forests. When the actual area sown only is taken into consideration, the pressure on land will appear to be quite appreciable. So far as Chotanagpur is concerned, the configuration of the land is an important factor in determining the course of agricultural or economic development.

FOREST.

The forests play an important part in the economic life of the district, are valuable national asset, and the State has naturally found it necessary to adopt special measures in the wider interests of the country to preserve the forests from reckless destruction. The immediate economic needs of the population and the preservation of the forests in the national interests are, however, somewhat conflicting. From the Land Revenue Administration Reports it appears that the *raiyats* found it hard to reconcile themselves to the reservation of forests and to the restriction of the rights imposed on them. As a matter of fact, working in forests for collecting timber, fire-wood and leaves has always remained a subsidiary occupation of a considerable percentage of the rural population of the district. Forests also have provided a grazing ground for the cattle. In Chatra subdivision especially the poorer class of people of Hunterganj, Simaria and Pratappur police-stations, depend for their living on roots known as *sarai*, *gaithi* and *tena*, which are found in abundance in the forests. It may perhaps be said that in all seasons the jungle produce does supplement the food supply of the poorer sections of the locality.

A progressive forest policy is bound to interfere in the national interest with the short-sighted individual needs of an economically backward population.

OCCUPATIONAL DISTRIBUTION OF POPULATION.

Regarding the occupational distribution of the population, it appears that out of a total population of 19,37,210, the strength of the rural population is 18,04,084, and that of the urban population is 1,33,126. The predominantly rural character of the population of the district

remains an outstanding fact. If the figure of the agricultural population is taken it will appear that the overwhelming preponderance of agriculture among the occupations has to this day remained unaffected. Agriculture still continues to be the principal means of livelihood of by far the largest section of the people. The total agricultural population of the district according to 1951 Census is 16,50,708 (8,22,075 males and 8,28,633 females). The number of persons engaged in production other than cultivation is 1,29,377; the number engaged in commerce is 41,115; the figure for transport is 10,902 and the number of persons engaged in other services and miscellaneous sources is 1,05,108.

ECONOMIC LIFE.

The Annual Land Revenue Administration Reports help in drawing a picture of the economic life of the district since the publication of the last District Gazetteer of Hazaribagh in 1917.

During the year 1916-17 in parts of the Chatra and Sadar subdivisions, on account of unequal rainfall, the outturn of the winter rice had suffered. There was no organised immigration into the district. The coal mines, generally, were unable to work at full pressure due to shortage of labour, as the local population kept aloof from the coal and mica mines owing to good harvests.

In 1917-18, although the *bhadai* crop was damaged by excessive rain, the winter rice was a very good harvest, and the year was, on the whole, one of agricultural prosperity throughout the district. Owing to the War and other reasons, prices of many commodities had shot up. The high price of cloth, kerosene oil and salt told heavily on the people. It is reported that the price of salt at one period during the year rose as high as 4 annas per seer in some parts of the district. After timely intervention by the Government to ensure adequate supplies, Sambhar salt began selling in the district from 4½ to 6 pice per seer and Liverpool salt up to 2 annas a seer. The average price of a pair of ordinary *dhoties* had risen from Rs. 2 to Rs. 6, and that of a pair of ordinary *saries* from Rs. 2-4-0 to Rs. 6-12-0. The good outturn of the winter rice crop combined with the increased wages for labour, however, helped the agriculturists to tide over the difficult situation. The group of people with small fixed income was seriously affected by the abnormally high prices. The Subdivisional Officer of Chatra had observed on the material condition of the people of his subdivision as follows :—

“ The people of the subdivision are chiefly dependant on agriculture and the collection of forest produce, such as lac, catechu, *mahua*, *sabai* grass, etc. On the whole, the material condition was fair, for though the *bhadai* crop

failed to a great extent, the paddy harvest was an excellent one. I say the condition was fair only owing to the very high prices that have been demanded during the year for salt and cloth. The condition of the aboriginal population is much worse than that of others; this is invariably the case where any considerable number of Hindus live amongst them as here. "

The year 1918-19 may be described to be a period of exceptional economic distress. Owing to the War (1914-18) the prices of certain indispensable commodities chiefly cloth, kerosene oil and salt reached to unprecedented height, while those of food-grains underwent violent oscillations. The material condition of the people, on the whole, was not good. A long break in the rains in July followed by heavy rains in August caused the *bhadai* crop to be a partial failure. Again, the total cessation of the rains about the middle of September caused the failure of the paddy crop. The *mahua* crop which supplied about 3 or 4 months' food to the poorer classes was partially affected by rains and hail in March and April. The crops in Giridih subdivision were slightly better than those of the rest of the district. Steps were taken to stimulate public charity and circles were formed for the distribution of gratuitous relief through non-official agency. Work was provided by the distribution of land improvement loans on a generous scale and *taccavi* loan was distributed for the purchase of seed for the next crop.

The general health of the people was very bad during the year. There was a virulent epidemic of influenza followed by pneumonia. The District Board and the Municipalities took such steps as were possible to counteract the epidemic by the distribution of medicines and appointment of additional doctors, but the epidemic was so unusual that only a fraction of the cases could be treated.

During the year E. I. Railway and B. N. Railway collieries at Bermo, however, continued to develop. Some small collieries started work which gave some employment to some of the able-bodied rural population. Giridih collieries raised heavy quantities of coal. Messrs. Bird and Co. opened out the South Karanpura coal-field near Ramgarh. The survey work for the extension of the B. N. Railway from Bermo to Karanpura was in progress. The output of coal in the district increased from 4,85,110 to 15,69,732 tons during the year. Mica mines were also very active. The output increased from 22,289 to 28,770 cwt. and the number of persons employed rose from 13,722 to 20,397. The demand for mica, however, declined with the cessation of hostilities. The lac trade in the Sadar and Chatra subdivisions continued to be brisk.

During the early part of the next year (1919-20) also, the material condition of the people was distinctly bad owing to scarcity, high prices and the outbreak of cholera. The local dealers had combined to raise the prices of rice and other food-stuff and the control of food-grains was taken in hand by the State. Circles formed for the distribution of gratuitous relief through non-official agency continued to do good work. Employment for the labouring classes was provided by the distribution of land improvement loans on a generous scale. *Taccari* loans were distributed for the purchase of seeds. The situation began to improve after the *bhadai* harvest in September and a bumper rice crop following in December and January brought a great relief. The *mahua* crop, the stand-by for the poorer people for 3 or 4 months, had partially failed. The general health of the people was on the whole better than in the previous year.

The joint E. I. Railway and B. N. Railway colliery at Bermo and the G. I. P. Railway colliery at Kargalli and some collieries at the Karanpura coal-fields continued to develop. Local prices of mica recovered from the depression which was apparent during the latter part of the previous year. The Chotanagpur Banking Association with its branches did business on an extensive scale. Coarse cloth was woven throughout the Chatra subdivision on hand-loom_s and had ready consumption. Large quantities of catechu were made in this subdivision and exported.

There were hardly any radical changes in the economic condition of the people in the following one or two years. As is usual with an agricultural economy based on undependable rainfall, heavy rains in the early part of the monsoon during 1920-21 proved disastrous to the *bhadai* crop and complete cessation of rains in September seriously affected the winter rice and *rabi*. There was a considerable increase in the cultivation of lac and the high price of lac prevailing in the year compensated to a large extent losses in other directions. *Mahua* crop was also good. Prices ruled high, but on the whole, were lower than during the previous year. The condition of the labourers was, on the whole, satisfactory. Local demand of labour due to the opening of new enterprises brought emigration to a standstill. Development of a few collieries owned by the various Railway Companies continued. *Charkha* spinning was stimulated by Non-co-operation Movement. Coarse cloths manufactured in Chatra subdivision were locally consumed as well as exported. Forest produce was also exported from the district.

The year 1921-22 was, on the whole, one of agricultural prosperity, but prices generally continued to be high, and the condition of the

*raiya*t was much the same as in the previous year. The price of cloth remained probably as high as it was in the preceding year. The general health of the people was fair. The development of the coal-fields of the district continued. Three collieries were working at Bermo. The labour in the Giridih mines went on strike on several occasions. The strikes were due chiefly to political causes and were encouraged by the preaching of non-co-operation.

The mica market was dull and many of the mica concerns had to close down. A railway line was in course of construction from Bermo along the Damodar Valley towards the coal-fields in Palamau. During this year the land required for this line and for a railway colliery at Swang near Gomia was under acquisition and there was a considerable opposition to its acquisition by the *raiya*ts.

During 1922-23 the material condition of the people was found to be improving. The economic development of the district had led to a greater demand for labour and higher wages. There was a bumper rice crop. Public health was, on the whole, good.

The development of the coal-fields in the district made considerable progress during the year. In the Bokaro-Ramgarh area two new sites were selected for railway collieries at Jarangdih and Sawang. The acquisition of the Sawang colliery for the E. I. Railway and B. N. Railway was practically complete and the acquisition of Jarangdih for the B. B. and C. I. and M. and S. M. Railways was going on. In the Karanpura fields prospecting operations on a large scale were carried out on behalf of Messrs. Bird and Co. and on behalf of the Railway Board. The results were very favourable and it was expected that within a few years ten or fifteen collieries at least would be working in the vicinity of Ramgarh. The road from Dumri to Nawadih was extended to Gumiya and a survey was made for a road from Gumiya to join Hazaribagh-Ranchi road near Barhi. Survey was also made for a road from Giridih to join the Grand Trunk Road. The mica industry had some signs of revival during the year. The lac trade did not have the same boom as in the previous year. The export from the district of *sabai* grass to Calcutta for the manufacture of paper marked an increase. Forests were ruthlessly exploited in spite of steps taken by the Government to check it. Ramgarh Wards Estate reserved a few square miles of forest in this year.

During 1924-25 as a result of the bumper crop, the third in succession, and of the unprecedented demand for labour, the agricultural and labouring classes had economic prosperity. The *bhadai* crop was comparatively poor, but the loss was more than counter-balanced by the bumper rice crop. It was, however, felt that the increase in the

wages paid to labourers had not increased their efficiency, but on the contrary, there was a general complaint that they worked shorter hours. The labourers spent a large part of their income on drink and on marriage feasts. A noticeable feature of the general prosperity was seen in the building of a large number of *pucca* houses both in the urban and rural areas. A Co-operative Bank was established in Giridih, and this institution was helpful to the agriculturists for finding loans. Unfortunately, the loans taken were not always spent on the proper purposes.

The development of the coal-fields of the district continued. The railway from Bermo to Hesla was completed. A number of collieries in Karanpura area were opened up. Another important item for the future economic prosperity, the construction of the joint railway and road bridge across the river Konar was taken up. The work was done by the B. N. Railway and the District Board contributed one and a half lakh of rupees towards the cost. The acquisition of land for the construction of the Hesla-Chandil Railway, so far as it lay within the district, was almost completed in this year.

The general health of the workers in the mines of the district was good. Most of them were employed in the Giridih and Bermo coal mines of which 4 out of 5 are owned by the railway companies. Steps were taken for proper housing of the employees and the supply of water in these mines. Each mine, moreover, maintained a dispensary and a primary school. The year was one of good crops, and consequently, there was the usual difficulty in obtaining an adequate supply of labour. The wages of labourers were higher than that of the previous year.

In the mica mines women were generally employed in splitting mica in the factories, in cleaning debris and removing earth. In the coal mines they were employed both on the surface and underground on much work as carrying coal and earth, loading and unloading wagons, filling coal tubs and assisting the masons. In the Giridih subdivision the *kamiauti* system still thrived. According to this system labourers were almost linked up indiscriminately with the land-owner for some money advance, given to their forefathers or some lands gifted. Once a *kamia* or a labourer on no wages was always a *kamia*. There is nothing particular now about *kamiauti* system which has practically died out. It is, however, difficult to accept the theory in the Administration Report that the average *kamia* appeared content to remain in the bondage which he had voluntarily accepted. There were efforts to establish weaving of coarse cloth as a cottage industry, but the move had failed as it was not a paying proposition.

The next two years, 1925-26 and 1926-27, were years of general prosperity. The paddy crop was good. The wages of labour remained high. Emigration to the tea gardens was extremely dull. Co-operative Societies were formed and were affiliated to the Central Bank at Giridih. The spread of these societies no doubt helped to break up the *kamiauti* system. Public health in the district was good except for a few cases of small-pox in certain localities.

The years also saw progress in the construction of the Barkakana-Chandil and the Barkakana-Daltonganj Railways, which were thrown open to public traffic in 1926-27. Work had already been started in the Argada colliery of the B. N. Railway and the Sirka colliery of Messrs. Bird and Co. The depression in the coal trade interfered largely with the development of private collieries. The receipts from cess on mines fell far short of the estimates. As a result of this, the District Board was unable to carry out some of its most important projects. The mica trade was slack, as there was not much demand from abroad. The produce of lac was better although the market was dull. There was a surplus stock of lac in the stock of the dealers. The supply of labour was generally sufficient and the wages were almost the same as in the previous year. The liquor shops had flourished as before as a big percentage of the income of the labourers was spent there.

There was a slump in the general prosperity during 1927-28. There was a partial failure of the paddy crop. *Rabi* crop was partly damaged by insect pests and inopportune rain. The prices of staple food crops showed a tendency to rise. The depression in coal and mica trade was continuing and telling heavily on the finances of the District Board which abandoned all original works of road construction. The Public and Private Carriers both for passengers and goods had a rapid increase in number and damaged the roads and it was a problem for the District Board to maintain the roads in proper form. There was a total failure of lac crop in the Chatra subdivision and this was to some extent responsible for the scarcity existing amongst the poorer classes. The scarcity recorded a rise in the incidence of emigration from the district to Assam Tea Estates.

The same economic trends continued in 1928-29 and 1929-30. In 1928-29 the railway line between Barkakana and Daltonganj was completed and thrown open to public traffic. A traffic survey by the Agency of E. I. Railway Administration for a line of railway from Hazaribagh Road to Hazaribagh Town was carried out. The expansion of motor bus and lorry traffic continued and there were regular services to places like Gaya and Dhanbad. The expansion of the railway and road traffic heralded future expansion of trade and industry.

The main economic feature in the subsequent few years was a general depression due to plenty of food supply and a rapid fall in the prices. The abnormal fall in the prices of food-grains affected those agriculturists who depended on cash to pay rents and for other expenses on the sale of the agricultural produce. Cultivators were finding it difficult to sell their stock. Owing to trade depression, the industrial areas were not able to provide sufficient work for the labouring classes though the wages of industrial labour in coal and mica areas continued to be the same as in the preceding year. The incidence of emigration to the tea gardens, however, fell. The decrease was probably due to the cheapness of food-grains. During these years the expansion of motor bus traffic continued resulting in further deterioration of roads. The finances of the District Board continued to be in a bad way on account of the depression.

The price of lac fell so low that hardly any lac was grown except in Gomia and Peterbar areas. The depression in the coal and mica mining industries still continued. In spite of the *Kamiauti* Act, the *kamiauti* system still prevailed. The depression also hit other indigenous industries chiefly to be found in the Chatra subdivision, namely, the manufacture of shellac, catechu, brass utensils, iron implements, wooden hair-combs, and the weaving of coarse cloth. There was a heavy slump and a substantial reduction in the purchasing power of the people. A large number of mica mines were closed and the coal mines were also working short time throughout the year 1931-32.

The depression is shown in the deterioration in rent collection, which fell from 49.01 to 41.5 per cent in the Encumbered Estates. In the Government estates there was a corresponding drop from 94.1 to 91.86 per cent. The wage level of the labourers had an abnormal fall. The daily wages of an agricultural labourer varied from 2½ to 4 annas in terms of cash. Other labourers were getting about 3 to 4 annas. In the coal mines the wage of coal cutter fell from about 8 annas a day three years ago to about Rs. 1-8-0 a week. There was a surplus of labour supply exceeding the demand. There was a large incidence of unregulated emigration of seasonal character to Burma and Bengal. There was a contraction in rural credit and the basis of credit was being converted from cash to grain. This was due to lack of money income.

The restriction on coal mining continued and the despatches fell from 22,39,373 tons in 1932 to 21,14,720 tons in 1933. The contraction was accompanied by a further fall in wages. Mica, however, showed a little improvement. Export increased in quantity by 15.4 per cent and in value by 19.21 per cent, which shows not only increased demand, but a slight rise in prices. A number of mines re-opened during the

year. The increase was mainly in splitting and scrap mica. The total value of mica exported during the year was Rs. 33,12,657 against Rs. 27,78,972 in the previous year.

Some signs of economic relief were, however, seen in 1934-35. Though the rice crop suffered in Sadar and Chatra subdivisions, the *bhadai* and winter rice, the sugarcane and *rabi* crops were good. The price of rice was 12 to 13 seers per rupee during this year as against 16 seers in the previous year. The food supply was plentiful and the tendency of the price level to rise was a good index. The wages of agricultural labour, however, remained at the same low level. In mica industry, however, the improvement continued, and there was increase both in the number of workers and the rate of wages. Coal also recorded an improved business and there was more employment but the wages continued to be the same, that is, about 4 annas a day. There was also some labour trouble in Giridih coal-fields. Rent collection improved which meant that there was more of paying capacity in the cultivating *raiyyats*. The settlements of the Excise shops had good bidding in mica and coal mines area.

The despatch of coal during the year increased from 21,14,720 tons to 24,15,086 tons in the previous year. The wages, however, did not record any perceptible improvement. Mica showed an appreciable improvement. The increase was seen particularly in splitting and scrap mica. The total value of mica exported during the year was Rs. 53,06,841 against Rs. 33,12,657 in the preceding year. During winter season the price of lac was Rs. 20 to Rs. 35 as against Rs. 10 to Rs. 20 in the preceding year.

The same trends were continued in the next year (1935-36). There was a favourable rainfall and the outturn of *bhadai* and the winter rice crop was not bad. The price of rice fluctuated between 12 to 13 seers per rupee. Food supplies were sufficient and the prices showed a tendency to rise. The wages of agricultural labour, however, did not record a rise. There were encouraging signs in the collection of rent. Government Estate collection increased from 94.0 to 96.63 per cent and in Wards and Encumbered Estates from 57.5 to 66.7. The opening of Ramgarh, Bokaro and Karanpura coal-fields had a healthy influence in breaking up the old *kamiauti* system which was prevalent in those areas during the time of Survey and Settlement operations (1908-15). The labourers had a good avenue for employment in coal mines. The mica mines and factories also afforded employment to a large number of labourers. So far as coal is concerned, there was a decrease in the despatch of coal from 24,15,086 tons in 1934 to 23,53,708 tons. Mica, however, showed some improvement. Exports during the year both in

output and value increased by 8.01 per cent and 19.2 per cent respectively. There was no improvement in the shellac market in Chatra subdivision. Manufacture of iron washers, chairs, buckets, trunks and utensils by a factory at Hazaribagh was closed. A sum of Rs. 18,000 was advanced by the Government this year for works on village improvement schemes. There was no extension of railways during the year. Government sanctioned a sum of Rs. 87,900 and Rs. 1,04,500 for the construction of two bridges, viz., Gulli Bridge on Chauparan-Chatra road and (2) Jamunia Bridge on Dumri-Bermo road. The number of motor buses plying on the road increased from 57 to 61, but the number of taxis decreased from 44 to 37.

The two principal industries of mica and coal had a revival during the years 1937-39. The wages remained almost stationary showing an increase by 5 per cent or so in certain areas. The despatch of coal in 1935 was 23,53,708 tons, but in 1936 the despatch came upto 24,46,347 tons. In 1937 there was a slight decrease in the despatch of coal which fell to 23,93,668 tons, but again in 1938-39 it shot upto 31,65,010 tons. There were more enquiries for good quality mica from abroad. The exports in mica in 1936-37 showed an increase in quantity by 42.4 per cent and in value by 21.5 per cent. In 1936-37 there was a further increase of exports in mica in quantity by 13.08 per cent and in value by 22.3 per cent. In 1938 the exports of mica increased in quantity by 33.99 per cent and in value by 14.48 per cent. The other important industry of Hazaribagh district, namely, shellac, however, did not show much improvement in any of these three years. The supply of labour in the town and in the collieries of mica-fields was sufficient. There was an improvement in collection of rent. The number of emigrants was negligible. The outturn of the crops was satisfactory. The price of rice varied from 11 seers to 14½ seers.

The amended Chotanagpur Tenancy Act came into force in 1938-39. and the condition of the tenants improved considerably. Illegal exactions from the tenants started disappearing. There was a small strike in a mica factory in Giridih in 1937-38, which was, however, controlled immediately. The demand of labour in coal and mica mines gave a death blow to the *kamiauti* system. The relationship between the landlords and tenants was generally good.

Mica trade received a violent oscillation in 1939-40. In the beginning of the year, there was a very heavy demand for mica due to the War. This led to a larger employment of mica labour in the mines and more output. But towards the end of the year, there was restriction on the export of mica leading to a great slump in the trade and a large number of people was thrown out of employment. This year

showed a decrease in the despatch of coal which fell to 31,34,659 tons. The export of mica decreased in quantity by 5 per cent, but increased in value by 16.6 per cent. It may be noted here that the owners of the mica mines and the middle men reaped a good profit although the labourers were not benefited at all. As a matter of fact, as has been mentioned, many of them were thrown out of employment towards the end of the year.

Rent Reduction and Bakast Restoration Acts were promulgated and acted upon giving considerable relief to *raiyyats* all over the district. Reduction to the extent of even ten annas to a rupee had been made. The landlords induced the tenants to effect compromise at higher rates in appeal stage.

But as is usual with the shifting trends of trade in an abnormal period marked by war, the depression in mica trade was liquidated in the very next year (1940-41). The Central Government controlled and made larger purchases of mica. The labour position became better as the military camps at Ramgarh and other places absorbed a large number of labourers and artisans. The prices of rice and other necessities of life showed an upward trend, but price control measures were taken quickly by the Government, and profiteering was checked to a great extent. There was a rise in the level of wages.

Owing to the Second Great War, the prices of all the commodities including food-stuff went on soaring in the next two years and price control measures by the State had to be tightened. The crops in the years 1941-42 to 1946-47 were not good. There was, however, a good demand of labourers in mica, coal and other industries in the district. The wages of agricultural labour also started moving up along with the wages in mica and coal-fields. The general condition of the agricultural population was not very prosperous in spite of some of the sympathetic tenancy measures, such as reduction of rent. The price of agricultural implements and plough cattle showed a disproportionate rise along with the high prices of the essential commodities.

The despatch of coal recorded an upward tendency. In 1944-45 the quantity of 34,20,154 tons of coal were despatched against 23,46,301 tons in the preceding year. Mica mines were worked at full pressure to ensure regular supply of mica to the Government. Factory work was extended and mica splitting as a home industry had a windfall. In 1945-46 the exports of mica had increased in value by 16 per cent. Charcoal business, particularly in Chatra subdivision, moved up owing to a heavy demand by charcoal gas plant in motor lorries due to the scarcity of petrol.

The economic trends did not fall into a set pattern owing to abnormal times. This was apparent when in 1946-47, in spite of the crops not being good and the agricultural wages and the wages prevailing in mica and coal mines being at the same high level, and in spite of a short supply of labour due to the difficulty of finding food-stuff on a liberal scale, there was a tremendous increase in the despatch of coal. This year 42,35,964 tons of coal was despatched as against 32,48,824 tons in the preceding year. The mica merchants and particularly the middlemen reaped a rich harvest, as the export of mica during 1946 increased in value by 90.5 per cent.

Although the outturn of the *bhadai* and winter rice crops was better on the whole in 1947-48, than in the preceding year, the prices remained at the same high level. There was no dearth of employment for labour in mica and coal-fields, and there was, consequently, no appreciable emigration. Wages of agricultural labour as well as the workers in the collieries and the mica mines remained at a high level. Agricultural wages varied from 12 annas to Re. 1, while in the mines it was from Re. 1 to Rs. 1-8-0. There was a lesser quantity of coal despatched during this year and the export of mica in value had also decreased by 27.04 per cent. As petrol became available, the charcoal business in Chatra subdivision had a depression. All the forests were taken over under the Bihar Private Forest Act. A new mineral, beryl, was discovered in Hazaribagh district.

The over-all position of the tenants and of the agriculturists could not be said to be prosperous. Along with a high level of wages, the prices of commodities were equally high and affected particularly the classes of fixed income groups. The condition of the industrial labour, however, was better, because industrial labour was getting more and more increase in wages. Coal recorded an increase in despatch in 1948-49. Export of mica decreased in value by 48.2 per cent during the year 1948.

During the following years 1949-54, the material condition of the people and particularly of the non-agriculturists could not be said to be very satisfactory. It is, however, true that a very small per cent of the population, namely, the big agriculturists were benefited by the high prices of food-grains. The price of rice varied between $1\frac{1}{2}$ seers to 2 seers, and there is no doubt that much of the high prices were engineered by the stock not being released by the big agriculturists. Government had to intervene by introducing a Paddy Levy Scheme by which the stock of the big agriculturists was attached at a reasonable price. Other price control measures were also adopted. So far as the crop position is concerned, the outturn was not bad, although it could

not be said to be very satisfactory. The outturn of sugarcane crop was good. The daily wages of the labourers varied from 12 annas to Rs. 1-8-0. There was an increase in the level of wages in the mica mines which varied from Rs. 1-8-0 to near about Rs. 2-8-0, and the earnings of the collieries were generally a bit higher. The high rise of the prices of food-grains and other necessities of life badly affected the labourers and the people of smaller income group. The rise in the price of plough cattle and daily necessities of life counteracted the benefits. Despatches of coal fell in 1949-50, while the export of mica increased in value by 217.9 per cent. More coal and mica mines were worked and the wages had increased by more than 200 per cent over the pre-war level.

In 1951-52 there was a slump in the mica trade and many people in mica trade were thrown out of employment. In this year the crop position was not satisfactory and some parts of Sadar subdivision and the whole of Chatra subdivision had to be declared scarcity area. Measures were taken to provide relief to the distressed people, and a large amount of *taccavi* loans and other loans were distributed. In spite of slump, there was an increase in the level of wages in the mica and coal fields. The average daily earnings in mica mines varied from Rs. 2 to Rs. 3 a day, and as usual, the earnings of the collieries were slightly higher. On the whole, the percentage of collection on current demand of the three Government Estates in the district was 93.12 against 97.79 in the previous year. In the Wards and Encumbered Estates the percentage of current collection on current demand was 88.9 against 69.1 in the previous year. The relationship between the landlords and tenants continued to be generally satisfactory.

During the year a sum of Rs. 10,40,000 was allotted to the district for Minor Irrigation Schemes. As many as 708 Minor Irrigation Schemes were taken up including the old schemes of the preceding years. All old schemes were completed in the year.

In 1952-53 Chatra subdivision had a fairly good harvest. The outturn of *bhadai* and winter rice crops in the other parts of the district was not bad. During the first part of the year, the prices of essential commodities ruled high, but in the latter part, the prices showed a downward trend. The wages of the agricultural labourer and the industrial labour in the mines continued to be as before. There was a better level of collection of current demand in the three Government estates. In the Wards and Encumbered Estates the percentage of collection of current demand was 77.3 per cent against 88.9 per cent in the previous year.

On the whole, it cannot be said that the economic condition of the people had improved particularly due to the high prices of foodgrains and the other necessities of life. There was a certain degree of tension between the employer and the employee in the collieries and the mica areas. The whole of Giridih subdivision was declared to be a scarcity area in May-June months of 1952-53, and gratuitous relief had to be given in certain areas. Construction of roads and Minor Irrigation Schemes gave some relief to the hard manual workers. A large number of Minor Irrigation Schemes were completed. There was also distribution of *taccavi* and other kinds of loans.

There was not much of variation in the trends of the economic condition in 1953-54. In Chatra subdivision there was some improvement in the material condition of the people on account of a fairly satisfactory yield of *bhadai* and of *kharif* crops. The slump in the collieries and in the mica business continued. The prices of food articles came down due to good crops and rice was again available in plenty in every market. The wages of the labourers either engaged in agriculture or in the collieries remained almost the same. The relationship between the landlords and the tenants continued to be generally satisfactory. The tenants in some of the villages which were notified under the Land Reforms Act were being dissuaded by the outgoing landlords and their agents from paying rents to the Government. The situation was tactfully handled by persuasion, and, in some cases, by executive action. For the amelioration of the condition of the people, Government had allotted a sum of Rs. 72,000 to the district under the Land Improvement Loans Act in 1953-54. Another sum of Rs. 3,00,000 was also allotted to the district under Agriculturists' Loans Act. A sum of Rs. 5,00,000 was allotted to the district for minor irrigation works. 272 Minor Irrigation Schemes were taken up including the old schemes of the preceding year, out of which 153 schemes were completed. There is no doubt that but for the availability of this money the condition of the common man would have further deteriorated.

The year 1954-55 was characterised by partial failure of paddy crops, slump in mica and retrenchment of labourers in the collieries and in mica factories. There was hardly any change in the wage-level. The over-all picture of the economic condition was not substantially different for the better.

This year also an amount of Rs. 5,26,000 was made available for distribution under the Agriculturists' Loans Act. A sum of Rs. 1,11,000 was allotted under the Land Improvement Loans Act. The entire amount was spent during the year. The liberal allotment of Rs. 6,00,000 made it possible to take up 436 minor irrigation schemes including the old schemes out of which 252 schemes were completed.

One of the aids to agriculture since 1949 has been a certain amount of State aid every year for the reclamation of waste lands. The cultivable waste lands of the district were near about 5,00,000 acres in 1947-48. Since 1949, land improvement loans have been particularly distributed for the reclamation of waste lands. The following are the figures of land improvement loans distributed for reclamation of waste lands from 1949-55 :—

				Rs.
1949-50	...	...	...	80,350
1950-51	...	...	...	62,065
1952-53	...	...	...	46,060
1953-54	...	...	...	58,520
1954-55	...	...	...	1,05,040

There has been a steady and substantial reclamation of waste lands in the district with the help of these loans.

As the agricultural economy in the district of Hazaribagh is essentially dependent on rainfall, Government have encouraged the construction of Minor Irrigation Projects, such as *bundh*, *ahars* (water reservoirs), etc. This scheme has made a great progress. From 1948-49 to 1952-53 about 1,988 Minor Irrigation Schemes have been constructed at a total cost of Rs. 39,59,781. The area likely to be irrigated as a result of these schemes will be in the neighbourhood of 39,769 acres of land. In the area peopled by others than the aboriginals, half of the cost of the project is realised from the persons benefited. As a special case, Government have exempted the aboriginals from this contribution. Among the other measures taken for the immediate relief of the tenantry, mention may be made of the amendments to the Chotanagpur Tenancy Act in order to give the *rai-yats* more substantial rights than what they had before in respect of the lands held by them as settled *rai-yats*. A special legislation was enacted for the speedy disposal of *bakast* disputes through Arbitration Boards. This measure known as Bihar Bakast Dispute Settlement Act, 1947, has had good results. Another beneficial measure was the Bihar Privileged Persons Homestead Tenancy Act, 1947, which conferred on the landless labourers and artisans the same rights in their homestead as are enjoyed by *rai-yats* under the Tenancy Act. The passing of the Land Reforms Act and the consequent vesting of the estates and tenures in the State is a revolutionary measure. It abolishes the many intermediaries between the State and the tiller of the soil. The Government policy is very broad-based, and the sole aim is to improve the condition of the cultivators. It is contemplated to spend 2½ per cent of the collection on works of improvement for the benefit of the tenantry. In 1953-54

under this head an allotment of Rs. 1,70,095 was entirely spent on the desilting of tanks, completion of irrigation projects, construction of wells and roads and improvement of bazars. In 1954-55 the amount similarly spent was Rs. 1,45,455-12-0.

Another measure recently taken to stop the economic exploitation of the aborigines from the hands of the money-lenders has been the opening of grain *golas*. When one remembers that in this district out of a total population of 19,37,210, the number of scheduled castes is 2,15,722, that of scheduled tribes is 2,67,552, and that of backward classes is 2,07,925, the need for such an institution is very apparent. So far 58 grain *golas* have been opened in the district. The Gram Panchayats manage 25 of them, while the rest are run by the Thana Welfare Officers. Seed grains are distributed on loan from these *golas*. By this scheme the *mahajans* have been hard hit, and their rate of interest has considerably fallen. Government have also decided that every family of Harijans in the district should be provided free of rent with 0.05 acre of land for homestead and 5 acres of land for agricultural purposes. This scheme is already being implemented. During 1954-55, 384.41 acres of land have been settled in Chatra subdivision with 167 persons. In Sadar subdivision 228.55 acres of land were settled with 177 such families. In Giridih subdivision 2,606.19 acres of land were settled with 1,512 families.

The Bhudan Movement was inaugurated in Hazaribagh district in 1954-55. More than eight lakhs acres of lands had been donated in the district and this is the largest contribution from one particular district in the whole of India. The movement introduced by Sri Binova Bhave is an all-India movement and calls upon the land owners to donate a portion of their lands to be ultimately distributed to the landless labour.

The wage-structure through the different years has been indicated. It will be seen that wages have generally been linked up with the prices of the essential commodities. There have been rise and fall in wages for the industrial labour due to increased demand for labour in the mica and coal-fields. The wage-structure of the agricultural labour has not had that type of incidence of rise as in the case of the industrial labour. The daily cash wages of an unskilled labourer in Hazaribagh district was 3 annas in 1916, and at the close of our review (1954), it was not less than Rs. 1-8-0. Similarly, the daily wages of a blacksmith, or that of a carpenter, in 1916, was 4 annas but they were near about Rs. 2-8-0, or even more, in 1954. The daily wages of a ploughman was near about 3 annas in 1916, and this was slightly above Re. 1 even in the rural areas in 1954.

In April, 1952, there was some inquiry into the current rate and its incidence on agricultural wages. The venue selected was village Lipda. The normal working hours for the carpenters, blacksmiths, cobblers, field labourers were calculated to be near about 9 hours a day. Wages were found to be given both in kind and in cash. The cash equivalent of the wages for the average carpenter or a blacksmith was Rs. 1-12-0. The total wages in cash for a cobbler was found to be Rs. 1-8-0, while that of the field labourers Re. 1 only. All these rates were in respect of males. In the case of females and children, the rates varied and were much less. Woman labour was usually available for agricultural operations only. Woman labour was also utilised for collieries elsewhere, but later, the employment of woman and child labour for underground work was prohibited by legislation.

The industrial workers in mica and coal-fields form an important feature for this district. As described before, an important industry in the district is the mining industry consisting mainly of mica and coal. Nearly 69 per cent of the total production of mica in India comes from the district of Hazaribagh alone. There are near about 500 mica mines employing approximately 40,000 workers when there is no slump. Before the actual export of mica, there have to be extensive dressing, sizing and other processes. For this processing there are about 200 mica factories distributed throughout the district. Regarding coal mining industry of the district, there are about 60 coal mines working and producing near about 30,00,000 tons of coal. The average number of persons employed daily in coal mines was 36,272 in 1951, 34,431 in 1952 and 34,227 in 1953. The Giridih group of collieries alone owned by the Government of India, Ministry of Production, employ near about 9,000 persons daily. The bulk of the industrial labour in the collieries depends to a great extent for their wages on the fluctuations of the market. During depression, the wages of a coal-cutter fell from about 8 annas a day to about Rs. 1-8-0 a week. The opening of a number of coal-fields in Ramgarh area has definitely contributed towards the breaking up of the *kamiauti* system and for doing away with the necessity of emigration.

The economy of the district is largely dependent on mica industry for another reason. Splitting of mica is essentially a cottage industry, which absorbs the leisure hours of the agricultural labourers and all the women and children dependent on agriculture. The reasons for the fluctuations of mica business are stock-piling and an unfortunate craze for supply of bad quality mica during the war boom. Now mica from Hazaribagh district has to stand the competition of other countries which have developed their mica industry. The Mines Act (1952)

controls the rate of wages of labour in mica mines. There are now proper regulations and rules framed under the Act as well as under Mines Maternity Benefit Act and Rules, Workmen's Compensation Act and Rules, Mines Creche Rules, Payment of Wages Act, etc. The Minimum Wages Act and Rules are now applicable to the mica factories.

In the very recent years the district has received a new look by the manifold activities of the Damodar Valley Corporation, which has opened up a series of multi-purpose dams for irrigation and the supply of electricity. The energy now available is bound to have beneficial results for the cottage industries. The Community Project Schemes and the development programmes have brought an integrated approach to the problem of rural development as an organic whole. The district of Hazaribagh is bound to play a very important part in the near future with the several dams, power stations, thermal station at Bokaro and the series of Community Development Schemes. There is going to be a factory for the manufacture of explosives at Gomia which will also be a help towards the industrialisation of the district. While agriculture will continue to remain the main occupation in the district, the industrial projects will, no doubt, absorb a big percentage of the skilled and unskilled labour of the district and will tend to raise the economic standard as a whole. The district has an abundance of resources, and there has been a beginning to utilise a large number of them.

सत्यमेव जयते

CHAPTER XV.

LAND REVENUE ADMINISTRATION.

ORIGINAL NUMBER OF ESTATES.

When the British took over the *diwani* of Bengal, Bihar and Orissa in 1765, the area of the district was distributed between three estates, Ramgarh, Kendi and Kharagdiha and one Thanadari Jagir of Kunda on which no revenue was assessed.

NUMBER OF ESTATES.

At the time of the last Revisional Settlement (1906—1909) there were seventy revenue paying estates, one temporarily-settled estate (Karharbari Colliery), four Government estates and 272 revenue-free estates. Before the Land Reforms Act came into operation there were in 1949-50, 84 revenue-paying estates, 4 Government estates and 266 revenue-free estates besides one rent-free land borne on the Touzi Roll. The temporarily-settled estate (Karharbari Colliery) has since been removed from the Touzi Roll.

AMOUNT OF REVENUE.

The land revenue payable was Rs. 47,260 only, the demand from the Government estates being Rs. 51,354. The increase in the number of revenue-paying estates since the last Settlement is due to the partition of parent estates of Tandwa and Khoksimar. The decrease in the number of revenue-paying estates is due to the merging of some of the estates with others.

ABOLITION OF ZAMINDARIES AND LAND REFORMS.

The problems relating to the Land Revenue system were for many years past engaging the attention of the Government and the public men in Bihar and Bengal where the Permanent Settlement of 1793 prevailed. Towards the end of 1938, the Government of Bengal appointed a Land Revenue Commission to examine generally the existing Land Revenue system of Bengal in its various aspects, with special reference to the Permanent Settlement. After examining the question in all its aspects and after recording evidence, the Commission made its report in 1940. After pointing out the serious defects in the Zamindari system the Commission came to the conclusion that in order to improve the economic conditions of the cultivators, the Permanent Settlement and the Zamindari system should be replaced by a *Raiyatwari* system under which the Government would be brought into direct relationship with the actual cultivators by the acquisition of all the superior interests in agricultural lands.

In its first session after the elections, the Bihar Legislative Assembly adopted the following resolution moved by a private member : " That this Assembly recommends to Government that immediate steps be taken for the abolition of the Zamindari System." As the vital interest of the State required immediate steps to be taken for improving agricultural production and the lot of the cultivators, the Legislature enacted various laws towards that end. The Bihar Tenancy Act and the Chotanagpur Tenancy Act were amended providing for commutation of produce rent into money rent on the basis of the price prevailing before 1942. The Legislature passed the Bakasht Disputes Settlement Act, 1947, in order to provide summary and cheap procedure for expeditious determination of disputes regarding possession. The Rent Reduction Operations covered the whole district for several years from 1938 when the Legislature passed an Act providing for reduction of rents. The operation led to a substantial reduction in rent and gave considerable relief to the *raiyyats*.

With a view to establishing direct relations between the State and the tiller of the soil two measures were conceived, viz., the Bihar State Management of Estates Bill, 1947 and the Bihar State Acquisition of Zamindaris Bill, 1947. Two years later the Bihar State Management of Estates and Tenures Act, 1949 (Bihar Act XXI of 1949) was passed. Some of the estates, viz., Dhanwar, Kunda and Satganwan were actually taken over and managed under the provisions of the Act but as the validity of the Act was challenged in court, the estates were released and no further action was taken. The Bihar Abolition of Zamindaris Act, 1948, received the assent of the Governor-General on the 6th July, 1949. The validity of this Act was challenged by some of the Zamindars and whilst the petitions were pending in the Hon'ble High Court the said Act was repealed by the Bihar Legislature and another measure called the Bihar Land Reforms Bill, 1949, was introduced in the month of December, 1949. The above Bill was passed and became law as the Bihar Land Reforms Act, 1950 on the 25th September, 1950, and was published in the *Bihar Gazette* Extraordinary of that date.

The Land Reforms Act was also challenged by the principal landlords of the State including the proprietor of Ramgarh Estate. Parts of this Act were declared *ultra vires* by the Patna High Court. The Constitution was amended by the Constitution 182 Amendment Act of 1952. Even after the amendment of the Constitution the Act was challenged but the Supreme Court declared the Act to be *intra vires* except for some minor sections. Government decided at first to take over the big estates and tenures having gross annual income exceeding Rs. 50,000. In pursuance of the decision of Government Ramgarh,

Kunda, Dhanwar, Gawan and portions of Madhubani Estate lying in this district known as the Satgawan Estate and portions of Bodh-Gaya and Budhouli Estate lying in the district were notified under the Act. Sikri and Jagodih-Tarwan, the only two tenures in the district having an annual income of Rs. 50,000, were also notified. Government have taken over possession of Kunda, Dhanwar, Satgawan, Gawan, Budhouli and Bodh-Gaya Estates and Sikri Tenure. The proprietor of Ramgarh Estate parcelled out his estate to a number of Trusts Companies and *khorphoshdars* with a view to save his estate from the operation of the said Act; and these concerns and individuals instituted a number of title suits against the State. The title suits were *sub-judice* for some time and the State Government had been enjoined from taking over possession of the Ramgarh Estate and Jagodih Tarwan Tenure.

The State Government later decided to take over the entire zamindari and intermediaries in the district of Hazaribagh. Under the provisions of section 3(b) of the Bihar Land Revenue Act all the estates and all the tenures had passed to and become vested in the State with effect from the 26th January, 1955.

The administrative machinery set up for the management of the lands thus acquired has been described later.

SARKARI HATA GOVERNMENT ESTATE.

The Sarkari Hata Government Estate extends over a compact area of 7.270 acres (according to the 1910 Survey) in and around the town of Hazaribagh and comprises 22 villages.

The name implies that this lies within the Hata or the limits of the cantonment which existed at the time.

The first nucleus of the estate was formed in the year 1790 when 465 *bighas* of land were acquired from the Ramgarh Estate for the purpose of establishment of a cantonment and an abatement of revenue amounting to Rs. 371 was allowed to the proprietor for this area. Additions were made to this area from time to time, the details of which as far as traceable are as follows :—

In 1819, 188 *bighas* were acquired at a rental of Rs. 203.

In 1838, 496 *bighas* were acquired at a rental of Rs. 879.

In 1842 the cantonment was abolished. It was, however, restored in 1859 when the total area held by Government was 1,400 *bighas* and the total rental payable to the Ramgarh Estate was Rs. 1,357, besides the original abatement of Rs. 371 allowed in 1790 (vide Mr. Lister's Gazetteer, page 154).

In 1865 a further area of 4,462 *bighas* was taken up (the Ramgarh Estate as a perpetual lease) at a rental of Rs. 2,600 with the object of extending and improving the sanitary condition of the cantonment. In 1871 the total rent payable to the Ramgarh Estate was commuted into a reduction of revenue amounting to Rs. 4,328 as detailed below :—

	Rs.	a.	p.
Abatement of revenue acquired in 1790 ...	370	14	5
Abatement of rent of lands acquired in 1858-59.	1,357	1	7
Abatement of rent of lands acquired in 1865.	2,600	0	0
Total	4,328	0	0

In May, 1884 the cantonment was again abolished and all the land and the building of the Military Department were handed over to the Civil Department (vide Mr. Slack's *Settlement Report*, Chapter II).

The administration of the estate assumed importance since the year 1865, area comprising 21 villages around the town of Hazaribagh was acquired, but no direct collection of rent from the *rai-yats* was made till 1875. During this period the villages used to be let out in favour of *thickadars* and other middlemen on short leases.

Besides the abatement of land revenue referred to above a sum of Rs. 20,631-9-0 was paid by Government to *rai-yats*, *jagirdars*, *Mokara-ridars* and all other kinds of intermediate holders in satisfaction of all their claims (vide paragraph 3 of Board of Revenue L. P.'s letter no. 466-A. of the 3rd August, 1875) and the Government thus acquired the position of absolute landlord, all occupants being reduced to the position of tenants at will (vide letter no. 967, dated 21st August, 1874, from H. S. Beadon, Deputy Commissioner, Hazaribagh to the address of the Commissioner).

It may be noted, however, that Col. Boddam granted some 27 perpetual leases for building sites from the year 1867—1872 on his own authority which were ultimately sanctioned by the Government though further grant of such leases was prohibited (vide Bengal Government Order communicated in Mr. Reginald's letter no. 2100, dated 21st August 1875).

The first regular Settlement of the estate was made in the year 1874-75 and it is known as Kasturi Lal's Settlement. The Settlement was made for a period of 10 years and was followed by Mr. Slack's Settlement in 1885-88 for a period of 15 years. The rental fixed at the Settlement was Rs. 7,749.

The next Settlement was in 1903-04 known as Babu Motilal Roy's Settlement which also was for a term of 15 years and terminated on 31st March, 1918. The rent fixed at this Settlement was Rs. 9,157-6-11 and the area comprised was 7,272 acres.

The Settlement of 1918 was made by Mr. Sifton, I.C.S., for 30 years and the assessment is Rs. 22,342-9-3. The total area under this Settlement is 7,270.37 acres. The settlement has been extended till 1978.

KODARMA GOVERNMENT ESTATE.

The Kodarma Government Estate extends over about 108 square miles of which about 50 square miles are reserved or protected forests. It is situated in the north of the Kodarma police-station. In 1841, the proprietor, Tejnarain Sahi, was implicated in a dacoity and in the following year Government issued order of confiscation of his property which consisted of 12 villages in Gaya district, known now as the Debour Estate and in Hazaribagh of the remainder of Gaddi Kodarma as well as the contiguous Gaddi of Bagridih. The demand of the estate which stood at Rs. 15,217 in 1904 has increased to Rs. 17,796-0-9 in the year 1952. The last Settlement was made in the year 1924. The leases expired in 1950 but have not been renewed. The demand will increase after renewal of the leases. The reserved forest is rich in mica and mining and splitting of mica provide employment for landless workers of the estate.

KHARAGDIHA KHAS MAHAL.

The holder of Gaddi Kharagdiha sold the entire estate to 11 persons. The sale was held to be in contravention of the conditions of the original Settlement and Government took possession of the estate in 1848. The purchasers sued Government for possession but as they did not bring the suit till more than 12 years had elapsed since the resumption of the estate their claim was held to be barred by limitation. In 1860 the Gaddi was settled for 20 years and was then found to contain 42 villages which were leased out in 17 lots. In 1847-48, resumption proceedings under Regulation II of 1819 were commenced in this district and continued upto the year 1856, when they were summarily stopped and orders were passed that all the villages in respect of which the proceedings had not finally closed should at once be made over to the parties in whose possession they had been found. During the above period, however, Government obtained possession of 151 villages, viz., 149 in Pargana Kharagdiha, one in Pargana Chhai and one in Pargana Kendi. A separate Government estate, termed as Kharagdiha Government Estate, was formed out for management of these 151 villages. The total demand of this estate stands at present at Rs. 11,265 against the original demand of Rs. 11,578. The fall in demand is due to the reduction in the rent after the Rent Reduction Operation.

The fourth Government estate is the Camping Ground bearing touzi no. 381 consisting of plots of lands situated mostly on the Grand Trunk Road. These were acquired for furnishing camping grounds for troops. These lands were for sometime past being settled for grazing purposes which has, however, since been discontinued as it has been decided that the lands belong to the Central Government. Accordingly the possession of all the Camping Grounds was delivered to the Military Estate Officer, Bengal Circle under Dis. letter no. 38364, dated the 14th April, 1953, except the Camping Ground of Hazaribagh the possession of which was delivered to the same authority on the 19th April, 1955.

LAND REFORMS DEPARTMENT.

A short account of the Land Reforms and zamindari abolition in this district has been given. According to the provision of section 3(B) of the Bihar Land Reforms Act, all the estates and all the tenures which did not vest by individual notification in the past under section 3(1) of the said Act, passed to and became vested in the State with effect from the 26th January, 1955. Now all the 7,110 villages in the district are under the management of the State Government.

In order to administer the land revenue of the district 42 Anchalcum-Development Blocks have been formed with their headquarters at the following places, namely—(1) Hazaribagh, (2) Katkamsandi, (3) Ichak, (4) Mandu, (5) Nagri, (6) Ramgarh, (7) Patratu, (8) Gola, (9) Peterbar, (10) Kasmar, (11) Jaridih, (12) Barhi, (13) Barkatha, (14) Kodarma, (15) Markacho, (16) Jainagar, (17) Barkagaon, (18) Keridari, (19) Tandwa, (20) Bagodar, (21) Bishungarh, (22) Gomian, all within the Sadar subdivision, (23) Chatra, (24) Simaria, (25) Pratappur, (26) Huntergunj, (27) Chauparan, (28) Itkhori within Chatra subdivision, (29) Giridih, (30) Bengabad, (31) Gandey, (32) Gawan, (33) Tisri, (34) Satgawan, (35) Dhanwar, (36) Birni, (37) Jamua, (38) Deori, (39) Dumri, (40) Pirtand, (41) Bermo and (42) Nawadih within Giridih subdivision.

Before the introduction of the Anchal Adhikari Scheme, however, for the revenue administration the district was divided into 478 *halkas*, each *halka* consisting of about 15 villages. To minimise the cost of management the 478 *halkas* were grouped into 245 blocks, each block consisting of about two *halkas* and each of the blocks was placed in charge of a Karamchari who was given a male peon to assist him in collection work. The 245 blocks were further grouped into 18 units each of which was in charge of a Circle Inspector. It was proposed to place one Gazetted Officer of the rank of Sub-Deputy Collector as Circle Officer to man the administration. The Circle Officers within their circle jurisdictions and the Karamcharis in their *halkas* or blocks were in charge not only of rent collection but also of agricultural statistics,

minor irrigation, execution of works of improvement, agriculture welfare, and other development works. With the total abolition of zamindaris in this district it was considered expedient to revise the pattern of administration by increasing the number of blocks so that each Karamchahi might be in charge of not more than ten villages to enable him to do more intensive work in his areas. Accordingly the 42 Anchals were sub-divided into 420 blocks. Each block is now in charge of a Karamchahi. These 420 blocks have been grouped into 42 units, each unit is in charge of a Circle Inspector and in the ultimate set up it is proposed to place one Gazetted Officer in charge of each Anchal-cum-Development Block. It has not been so far possible to post one Gazetted Officer to each Anchal due to paucity of officers. But, however, a Gazetted Officer of the rank of Sub-Deputy Collector has been posted at Kodarma, Ramgarh, Bagodar, Sadar, Tandwa, Bermo-cum-Nawadih, Giridih, Dhanwar, Gawan, Pratappur, Chauran and Chatra Anchal-cum-Development Block. Each Karamchahi has been given a male peon to assist him in his work. The 420 blocks are again sub-divided into 840 Gram Panchayats. One Gram Sewak will be under each Panchayat. His duty will be to assist the Mukhia in the administration of the Panchayat work. In the ultimate set up the work of rent collection will be handed over to the Gram Panchayats who will be given a commission of about 10 per cent of the rent collected.

For the administration of the N. E. S. Blocks, it has been decided that there will be one Gazetted Officer who will eventually function as Anchal Adhikari as well. Under him there will be 10 village level workers besides a contingent of technical staff such as Overseer, Veterinary Officer, Social Education Organisers, etc. Printed hand books of instructions have been issued to the Anchal Adhikaris for their guidance.

Government decided that for every Anchal-cum-N. E. S. Block an area of 15 acres of land should be selected for construction of buildings for accommodating the Officer and the staff working in an Anchal-cum-N. E. S. Block. Accordingly 15 acres of land for every Anchal have been selected and Land Acquisition proceedings have been started in respect of the *rai-yati* lands selected for the purpose. The expenditure on this item was to be met by diversion of funds originally provided under "Agriculture" in the Five-Year Plan, and the amount has to be spent during the financial year 1955-56. A rough estimate of the land for which Land Acquisition proceeding has been resorted to has been sent to the Development Commissioner. A type plan has been prepared for construction of buildings and tenders were invited for the purpose. Construction work has been started in some of the Anchal-cum-N. E. S. Blocks, viz., Dumri, Bengabad, etc., and it is expected

that action for construction of buildings in the remaining blocks will be taken up as soon as the Land Acquisition proceeding is complete.

CULTIVATING TENANCIES.

Before the passing of the Bihar Land Reforms Act, 1950 the cultivating tenancies of the district were divided into tenure-holding cultivators, *raiyats* and under-*raiyats* on the basis of Chapter VI of the Settlement Report. Tenure-holding cultivators were either *khuntkattidars* or *doami thikadars* with the exception of one *Mundari khuntkatti* tenure-holder in Gola.

KHUNTKATTI TENURES.

In the case of the *khuntkatti* tenures the descendants of the original founders had the rights of cultivating the lands which they originally added clearing the jungle. They also collected the rents of their relatives, or of the outsiders who from time to time had been admitted to their villages. The task of collecting the rents might have been in the hands of a single member, or divided with others and all such were technically tenure-holders by virtue of their function of receiving rent. Those who did not discharge that function were technically not tenure-holders and were recorded as *khuntkatti raiyats*.

The cultivating tenancies of the district underwent a drastic change with the passing of the Bihar Land Reforms Act, 1950. All the intermediaries of the tiller of the soil either tenure-holders, under-tenure-holders or landlords have disappeared for good and to all intents and purposes there remained only the tiller of the soil and the State Government.

The tenancies of the district now can be divided under two categories :—(1) the tenants who held land directly under the State Government and (2) the *Mundari khuntkatti* tenancies. The *Mundari khuntkatti* tenancy, however, still exists as this tenure had been exempted from the operation of the Bihar Land Reforms Act. The origin and incidents of this class of tenancy are described in Chapter V of the Settlement Report of Ranchi, in which they are numerous and important.

It is difficult to say the exact number of settled *raiyats* in this district as the outgoing landlords did not part with their *jamabandi* registers. Since the Survey Settlement of 1906-09 no Revisional Settlement has been made in the district. The Land Reforms Department has been collecting the statistics of holdings by means of *bujharat*. The exact number of tenancies will only be available when *bujharat* is done and accepted after a proper check.

The outgoing landlords were aware of the move for the abolition of Zamindari system in the State since 1947 when the Bill relating to the acquisition of zamindaris in the State was introduced in the

Legislative Assembly. In the course of nine years that have elapsed the outgoing Zamindars have adopted themselves to the changed situation and as a result the majority of them have resorted to cultivation or business and some of them have taken recourse to service.

The *jamabandis* and *khatians* kept in the Anchal offices are being brought up-to-date by means of *bujharat* but the record-of-rights cannot be properly brought up-to-date unless a revisional survey is held.

The passing over from the zamindari to the *raiwtwari* system is only the first phase of the Land Reforms. The agrarian policy of Government has not yet taken any final shape. The Land Reforms Act provides for the establishment of a Bihar Land Commission to advise the State Government generally with regard to the agrarian policy which the State Government may from time to time follow in administering the system of land tenure in the State. In the meantime, however, the State Government have been carrying programmes of works of improvement, like execution of tanks, *ahars*, etc., desilting of tanks for pisciculture, to provide irrigational facilities with a view to increase the food production of the district and to enable the people to supplement their cereal requirements by fish. Special attention is being paid to provide grazing grounds for cattle in village and to give educational and medicinal facilities to the tenants of the estates taken over.

COMPENSATION.

As a result of the area-wise notification under the provision of the Bihar Land Reforms Act, 1857 outgoing intermediaries lodged their returns for payment of compensation. The returns lodged, however, do not contain the details required and difficulties are being felt for commuting the *ad interim* payment of compensation.

SETTLEMENT OF LAND WITH HARIJANS AND ABORIGINALS.

In order to improve the economic condition of the Harijans and Aborigines Government decided that every Harijan family should be provided with 0.05 acre of land for homestead and 5 acres of land for agricultural purposes. Accordingly a list of the Harijans and aboriginal families living in a village had to be prepared and also the vacant culturable waste lands lying in a village demarcated for the purpose. Intensive drive was made in this district for settlement of land with such classes of people. As a result during 1954-55, 384.41 acres of lands with 167 persons were settled in Chatra subdivision. In Sadar subdivision 278.55 acres of lands were settled with scheduled castes, scheduled tribes and backward classes during the period under review consisting of 177 families. In Giridih subdivision, 2,606.19 acres of lands were settled with 1,512 families in 1955.

CHAPTER XVI.

GENERAL ADMINISTRATION.

DEPUTY COMMISSIONER.

The present district of Hazaribagh formed part of the old district of Ramgarh till 1833.

Due to the great Kol rising of 1831-32 necessity was felt for application of special laws in tracts now called Chotanagpur division which at that time included the districts of Ramgarh, Jungle Mehal, etc. The regulation district of Ramgarh was abolished from the 2nd June, 1833 by Regulation XIII of 1833 and the non-regulation province of South-West Frontier Agency was created in its place, to be administered by the Governor-General through a Governor-General's Agent. The whole tract was divided into three divisions, Lohardagga, Manbhum, and Hazaribagh (Singhbhum was added three years later) and each was placed under a Principal Assistant to the Governor-General's Agent. Mr. J. Davidson, Assistant to the Governor-General's Agent, was appointed to the charge of Hazaribagh division from the 15th January, 1833, *vide* Mr. Secretary Macsween's letter of the 9th December, 1832 and Capt. Wilkinson's (Governor-General's Agent, South-West Frontier Agency) letter of the 7th January, 1833. Under the instructions contained in the fifth paragraph of Wilkinson's letter, the man in charge of the division was authorised to perform all the duties which had heretofore devolved on the Magistrate and Collector of Ramgarh in the division now placed under his charge.

On creation of the Lieutenant-Governorship of Bengal the designation of the Governor-General's Agent, South-West Frontier Agency, was changed by Act XX of 1854 into Commissioner of Chotanagpur division. The Principal Assistant to the Governor-General's Agent became Principal Assistant to the Commissioner.

By Bengal Government notification no. 886-B, dated the 30th April, 1861 the Principal Assistant to Commissioner was directed to be designated in future as the Deputy Commissioner.

The Deputy Commissioner is now the pivot on which the district administration turns. He is at the head of the district administration and is under the administrative control of the Commissioner of the Chotanagpur division of which Hazaribagh forms a district. Besides, being responsible for the maintenance of law and order he is also at the head of the Revenue Department in the district. He is also the officer who co-ordinates and is expected to superintend the working of

the offices of the other administrative departments. He is the officer who is primarily concerned with all the needs and exigencies of the district administration. As the State is now a Welfare State, the Deputy Commissioner is responsible for the planning and execution of the schemes for the all-round development of the district.

The Deputy Commissioner of Hazaribagh has also certain special responsibilities so far as the Hazaribagh Mines Board is concerned as he is the *ex officio* Chairman of the Hazaribagh Mines Board. He is also the President of the District Forest Advisory Committee, Chairman of the District Education Planning Committee and *ex officio* the Mica Controller for Bihar.

For law and order he is helped by the Superintendent of Police, an officer of district rank with headquarters at Hazaribagh. The Deputy Commissioner has the Subdivisional Officers at the subdivisional headquarters while the Superintendent of Police has his Deputy Superintendent or Inspector of Police at the subdivisional headquarters. The Superintendent of Police is in overall charge of the Police organisation of the district, but is under the administrative control of the Deputy Commissioner.

For revenue work the Deputy Commissioner is helped by the Additional Collector. With the recent abolition of the Zamindari the work in the Revenue Section has greatly increased. The Additional Collector has a number of Additional Subdivisional Officers for revenue work and under them Circle Officers.

POLICE ADMINISTRATION.

The Police administration is under the supervision of the Superintendent of Police, who is assisted in the Kodarma and Chatra Circles by a Subdivisional Police Officer. The Deputy Superintendent of Police in charge of the office at Hazaribagh is entrusted with responsibilities of Ramgarh, and Sadar Police Circles. There is a Deputy Superintendent of Police for Giridih subdivision.

There are 33 police-stations, 3 beat houses and 4 out-posts in the district. They are as follows :—

HAZARIBAGH SUBDIVISION (SADAR).

Police-Station.	Beat Houses	Out-posts.
1. Sadar (Hazaribagh) ...	...	Baribazar.
2. Ichak ...	...	...
3. Mandu ...	...	West Bokaro.
4. Barkagaon ...	Tandwa.	...

Police-Station.	Beat	Houses.	Out-posts.
5. Ramgarh	Argada.
6. Gola
7. Gomia
8. Peterbar
9. Jaridih
10. Barhi	...	Telaiya	...
11. Kodarma
12. Jainagar
13. Bagodar	...	Sariya	...

CHATRA SUBDIVISION.

14. Chatra	...	...	...
15. Hunterganj	...	...	...
16. Pratappur	...	...	...
17. Simaria	...	...	...
18. Chauparan	...	...	...
19. Itkhor	...	...	...

GIRIDIH SUBDIVISION.

20. Jamua	...	...	...
21. Deori	...	...	...
22. Birni	...	...	...
23. Dhanwar	...	...	...
24. Gawan	...	...	...
25. Satgawan	...	...	...
26. Giridih Town	...	...	...
27. Giridih Muffasil	...	...	...
28. Gandey	...	...	...
29. Bengabad	...	...	...
30. Pirtand	...	...	...
31. Dumari	...	...	...
32. Nawadih	...	...	...
33. Bermo	...	{ Bokaro (temporary) Gobindpur (permanent).	...

The sanctioned strength of the Civil Police is as follows:—

Superintendent of Police	...	...	1
Deputy Superintendent of Police at Sadar	...	...	1
Subdivisional Police Officers	...	...	3
Inspectors	...	...	8
Sergeant-Major	...	...	1
Sub-Inspectors	...	...	67—71
Sergeant	...	...	1

Assistant Sub-Inspectors	...	...	67—69
Havildars	...	...	25—27
Constables	...	...	826—856
Chaukidars	...	...	1,733
Home Guards	...	...	114
<i>Digwars</i>	...	...	326

Digwars and *Sardars* have not increased in number, rather the number has come down since the writing of the last Gazetteer, as those who died without any heir were not replaced. The hilly nature of the district at the earlier stage of the British administration brought in the institution of *Digwars* and *Sardars*. They were charged with the guarding of the mountain passes and had the responsibility of looking to the safety of the travellers. Normally, they were given lands for their services. With the opening up of the roads and introduction of vehicular traffic their importance has declined.

The area of the district is 7,016 square miles and the average area of a police-station is about 213 square miles. The population of the district according to the 1951 Census is 19,37,210, thus the proportion of a police to the civil population is one police to 1,866 people.

The annual cost on the general administration through Police Department is given below :—

			Rs.	a.	p.
Civil Police	...	...	12,65,118	6	0
Rural Police	...	...	2,28,346	0	0
Home Guards	...	...	39,050	4	0
			15,32,514	10	0

Thus the per capita expenditure on police administration comes to thirteen annas per annum.

The district is divided into 6 Police Circles which are put under the charge of Inspectors. There is one Police Inspector for Mica Field and another for the Court.

Below is given the crime position for the years 1947—1952 :—

Year.				Total crimes.
1947	...	...	...	2,413
1948	...	...	...	2,405
1949	...	...	...	2,754
1950	...	...	...	3,144

The detailed statistics of crime under the principal heads in the district for 1951-53 are as follows :—

Heads of crimes.			Number of cases reported during—		
			1951	1952	1953
Murder	...	..	51	54	41
Dacoity	..	..	74	103	60
Robbery	..	..	48	62	58
Burglary	..	..	1,142	1,126	1,017
Theft		..	993	1,016	934
Riot ..	..	..	112	131	127
Swindling	..	..	19	15	29

The function of the Village Panchayats and the recruitment of the Home Guards have also helped police in the maintenance of law and order in the district.

The Jail at Hazaribagh is a Central Jail. It was originally built to receive long-term prisoners of Chotanagpur division. But since 1916 it receives prisoners both detenus and convicts from other districts of Bihar for political or non-political offences. On account of cellular accommodation and most genial climate of this place, generally high-ranking political leaders of Bihar and other provinces of India were kept in this Jail at intervals between 1921 to 1942. The Jail contains 228 cells. The present capacity of the Jail is for 1,340 males and 30 females, covering 250 acres of land.

The water supply to the Jail is obtained from the lowest of the three lakes and after being filtered by the Public Health Department, is supplied to the prisoners.

As the Central Jail at Hazaribagh has more cellular accommodation it has become a receiving jail for the lunatics of the State of Bihar, whose accommodation is not immediately available in the Mental Hospital at Kanke (Ranchi). It is also the receiving jail for the hand-picked refractory and desperate prisoners of the State of Bihar.

Besides this Central Jail, there are jails at Chatra and Giridih. They were erected in 1916. Convicts of the respective subdivisions are kept there.

The Jail is likely to be industrialised by the introduction of profitable industries on power, besides the cottage industries which have been pursued since long.

Reformation of the prisoners by introducing social education, mass literacy and also training them in profitable labour which may help their rehabilitation after their release from the jail and help them in proving good citizens of the State, have become the primary objects of the jail administration.

JAIL INDUSTRIES.

A description of the Jail industries is given below.

Weaving.—This consists of the following :—

- (1) Cloth-making of different types of different designs, such as, different types of *chaddars*, H. C. towels, H. B. towels, dusters, canvas cloth, swabs, *dosuti* cloth, and prisoners' cloth of different sizes, etc.
- (2) *Duree*-making of different sizes and designs, such as, flowery pattern *duree*, plain *duree*, *duree sani*, flowery pattern of *duree sani*, pole carpet, etc.
- (3) *Newar*-making of different types and colours.
- (4) *Silk*-making, such as *endi* silk *chaddars*, *endi* silk, silk and coating cloth, silk cloth of different designs, silken shirt-making cloth, etc.

The requisition of yarn for weaving cloth is partly met from Buxar Central Jail and partly from the hand spun yarn which is spun in *charkha* in this jail. Articles which are manufactured for sale include towels, *chaddars*, coloured *chaddars*, *newar*, *duree* and other varieties of cloth. Prisoners' cloths are manufactured for the use of inmates of the jail. Cloth is also supplied to other jails of the State. In the jail itself rearing of *eri* and *mulberry* insects is also done, and from their cocoons yarn is produced out of which silk clothes are prepared.

2. *Aloe Industry*.—The Aloe industry within the Central Jail consists of the following :—

- (i) Aloe fibre.
- (ii) Twine-making, ropes of different quality.
- (iii) Mats of different types.

The Hazaribagh Central Jail has got 500 acres of land containing aloe plants from which leaves are taken for extracting fibre, which is done by the prisoners. The aloe fibre after spinning is put into the shape of twine which is used for making aloe mats for the use of prisoner's

beddings, and are also supplied to the other jails of Bihar and to the hospitals for the same purpose. Besides this, different saleable articles are also manufactured, such as aloe door-mats, pile-mats, wall-broom and mats (plain and coloured of different designs).

3. *Tailoring*.—This is confined to the following heads :—

(i) All sorts of prison garments.

(ii) Gun cover, hand bags, holdall, etc.

Prison garments are prepared here for the use of prisoners of this jail and are also supplied to other jails according to their requirements. Besides this, some other saleable articles are prepared, such as gun cover, hand bags, holdall, etc.

4. *Oil Mills*.—*Mustard oil and mustard cake*.—The mustard seed is crushed in the Wardha-pattern *ghanies* by bullocks. The oil is supplied to the prisoners and also sold to the public. Mustard cakes are used for the dairy farm of this jail as well as sold to the public.

5. *Spinning*.—Spinning is done by hand. The yarn is produced in Wardha *charkha* and the same is used in weft with mill yarn.

6. *Printing*.—In this jail all kinds of forms and registers are printed as required by the other jails of Bihar as well as by this jail.

7. *Carpentry*.—The Carpentry section is engaged in turning out furniture of various kinds.

8. *Smithy*.—Various kinds of domestic utensils and agricultural implements are manufactured here. The products are both used in the jail and are also offered for sale.

9. *Pottery*.—Earthen articles like pitchers, tubs, etc., are manufactured by the prisoners for their own use.

10. *Brick Industry*.—Bricks and different types of tiles are prepared by the prisoners.

11. *Agriculture*.—Prisoners are given training in model farming, such as growing paddy on Japanese method and dairy and poultry.

REFORMATORY SCHOOL.

Hazaribagh has a Reformatory School for juvenile offenders. There is a Technical School which imparts technical education to the boys who are sent there. There is a well-equipped workshop where technical training in cabinet-making, blacksmithy, moulding, motor car repairing, weaving, tailoring, machine shop, book binding and leather work is given to the inmates of the school.

ADMINISTRATION OF CIVIL JUSTICE.

Before the creation of a separate judgeship for Hazaribagh district, that is, up to 3rd April, 1949, the Judicial staff entertained for the purpose of Civil Justice consisted of the Judicial Commissioner of Chotanagpur, whose headquarters were at Ranchi, the Deputy Commissioner Sub-Judge, who dealt only with the execution of decrees and certain Insolvency and Succession cases, a special Sub-Judge whose headquarters were at Ranchi and an Additional Subordinate Judge sanctioned from time to time to cope with extra work. There were two Munsifs, one at Hazaribagh and the other at Giridih and one Subdivisional Officer Munsif at Chatra. The Munsif of Giridih assisted in the disposal of rent suits in his special character as Deputy Collector. Additional Munsifs were appointed from time to time to cope with extra work. Up to this date the Civil suits up to the value of four thousand rupees were decided by the permanent Munsifs; up to the value of Rs. 1,000 by the Additional Munsifs and above Rs. 4,000 by the Additional Subordinate Judge. These courts also decided execution and miscellaneous cases arising from the decisions of their own courts. Whenever the Court of the Additional Sub-Judge was abolished, one of the Senior Deputy Magistrates of Hazaribagh used to be empowered with *ex officio* powers of a Sub-Judge. The Additional Subordinate Judge was also empowered by a notification issued by Government to deal with succession cases up to the value of rupees ten thousand and insolvency cases up to the value of rupees five thousand. He was also authorised to entertain appeals up to the value of Rs. 200 (rupees two hundred) in his Court. In Chotanagpur rent suits are tried by the Revenue Courts and not by the Civil Courts. The Civil Returns of the Hazaribagh district were submitted to the Judicial Commissioner of Chotanagpur and the latter submitted them to the High Court along with the Civil Returns of the districts of Ranchi and Palamau. The appointments and dismissals of the Civil Court staff working in the district of Hazaribagh were made by the Judicial Commissioner of Chotanagpur. The latter also heard and disposed of appeals from the decisions of the Additional Subordinate Judge up to the value of rupees five thousand. Some of the appeals from the decisions of the Munsifs were transferred by the Judicial Commissioner of Chotanagpur to the Additional Sub-Judge for disposal.

Statistics of Civil Justice from 1944 to 1948 are given in the following table.

Statistics of the Civil Justice from 1944 to 1948.

Court.	Nature of cases.	1944.		1945.		1946.		1947.		1948.	
		Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.
		Received by transfer.	Disposed of by transfer.	Received by transfer.	Disposed of by transfer.	Received by transfer.	Disposed of by transfer.	Received by transfer.	Disposed of by transfer.	Received by transfer.	Disposed of by transfer.
1	2	3	4	5	6	7	8	9	10	11	12
Judicial Commissioner.	Appeals ..	115	96	112	83	131	102	144	149	119	176
Additional Subordinate Judge.	Misc. Judl. cases ..	11	16	11	10	12	13	10	9	7	14
	Suits ..	45	29	48	47	48	63	41	62	39	54
	Misc. Judl. cases ..	53	55	55	58	44	53	52	45	150	62
	Ex. cases ..	62	69	61	58	58	56	51	51	62	57
Munsif. ..	O. P. ..	1,680	1,473	940	838	1,119	1,147	793	931	851	897
	S. C. C. ..	549	442	364	447	221	263	181	179	131	207
	Misc. Judl. cases ..	278	264	356	279	254	270	223	247	206	189
	Ex. cases ..	956	982	892	881	744	857	685	650	674	679

The Hazaribagh Judgeship was created on the 4th April, 1949. Since then the Judicial staff maintained for the purpose of Civil Justice in the district of Hazaribagh has consisted of the District Judge of Hazaribagh with its headquarters at Hazaribagh, a permanent Sub-Judge and two Munsifs, one at Hazaribagh and the other at Giridih and one Subdivisional Officer-Munsif at Chatra. There is now an Additional Sub-Judge. Additional Munsifs are appointed from time to time to cope with extra work. Since 29th February, 1952, one Additional Munsif has been posted at Hazaribagh to clear off congestion in the file of the Munsif, Hazaribagh. He is also deputed to Chatra for about a month every year to clear off congestion in the file of the Subdivisional Officer-Munsif there. Another Additional Munsif has been posted at Giridih since 4th March, 1952, to dispose of pending work in the file of the Munsif of Giridih. Up till now Civil suits up to the value of Rs. 4,000 are decided by the permanent Munsifs; up to the value of Rs. 1,000 by the Additional Munsif and above Rs. 4,000 by the Subordinate Judge. These Courts also, as before, decide execution and miscellaneous cases arising from the decisions of their own courts.

Now that there has been a District Judge at Hazaribagh, the powers of the Subordinate Judge to deal with Succession and Insolvency cases including the power of entertaining appeals up to the value of Rs. 200 have been taken away and vested in the District Judge. Rent suits are still tried by the Revenue Courts and not by the Civil Courts. The Civil Returns of the Hazaribagh district are now submitted to the High Court, Patna by the District Judge, Hazaribagh. The appointment and dismissal of the Civil Court staff working in the district of Hazaribagh are now made by the District Judge, Hazaribagh. The latter also hears and disposes of appeals from the decisions of the Munsifs. Some appeals from the decisions of the Munsifs are transferred to the Sub-Judge for disposal. Posts of Additional Judge and other Sub-Judges have been created.

Statistics of Civil Justice from 4th April, 1949 to 30th September, 1953 are given in the following table.

Statistics of Civil Justice from the 4th April, 1949 to the 30th September, 1953.

Court.	Nature of cases.	4th April 1949 to 31st Decem- ber 1949.		1950.		1951.		1952.		Up to 30th September 1953.	
		Insti- tuted.	Dis- posed of.	Insti- tuted.	Dis- posed of.	Insti- tuted.	Dis- posed of.	Insti- tuted.	Dis- posed of.	Insti- tuted.	Dis- posed of.
		Re- ceived by trans- fer.	Dis- posed of by trans- fer.	Re- ceived by trans- fer.	Dis- posed of by trans- fer.	Re- ceived by trans- fer.	Dis- posed of by trans- fer.	Re- ceived by trans- fer.	Dis- posed of by trans- fer.	Re- ceived by trans- fer.	Dis- posed of by trans- fer.
District Judge.	Suits	2	43	2	45	1	95	1	49	2	3
	Appeals	136	—	116	—	28	—	151	—	47	—
	Misc. Judl. Cases	160	182	55	45	54	79	49	76	42	42
Sub-Judge	Suits	13	1	232	103	104	61	55(a)	45	61	45
	Appeals	56	56	—	—	104	—	104	—	—	—
	Misc. Judl. Cases	1	152	—	—	—	—	—	—	—	—
Munsif ..	Suits	55	2	45	77	55	67	79	41	76	67
	Appeals	39	153	50	32	43	41	52	44	41	35
	Misc. Judl. Cases	816	62	900	43	38	36	31	34	33	23
	O. P. Suits	—	891	—	740	715	434	660	727	605	571
	S. C. C.	1	2	337	386	319	324	130	130	248	234
		404	329	—	—	305	291	—	—	—	—
		380	251	224	346	228	214	199	213	156	163
		648	718	594	631	472	490	493	421	447	384

104 suits transfer-
red to H. C.,
Patna.

One from D. C.,
Hazaribagh to
H. C., Patna.

ADMINISTRATION OF CRIMINAL JUSTICE.

Before the creation of a Judgeship, i.e., up to 3rd April, 1949 Criminal Justice was administered by the Judicial Commissioner of Chotanagpur, by the Deputy Commissioner, who was vested with extended powers under section 30 of the Criminal Procedure Code, by the Subdivisional and other stipendiary Magistrates and by the Honorary Magistrates vested with powers of various classes. The Judicial Commissioner used to come to Hazaribagh from time to time on circuit duty to do the criminal business arising within the district. He also heard appeals from the decisions of the Magistrates of the first class. The Deputy Commissioner heard appeals from the decisions of second and third class Magistrates. At Hazaribagh Sadar, Giridih and Chatra the Subdivisional Magistrates tried all cases arising within the subdivisions as far as they could and transferred the remaining cases to other Magistrates posted to the subdivisions for disposal.

Statistics of Criminal Cases from 1944 to 1948 are given in the following table.



The staff entertained for the purpose of administration of Criminal Justice in the district of Hazaribagh consists of a Sessions Judge, an Assistant Sessions Judge, Deputy Commissioner, Deputy Magistrates, Sub-Deputy Magistrates and Honorary Magistrates. The number of Magistrates at the district and the subdivisional headquarters vary according to the needs. Cases triable by the Court of Sessions are committed by Magistrates to the Sessions Court. The Sessions Judge tries offences punishable with death. Other Sessions cases were tried by an Assistant Sessions Judge and Magistrates especially empowered under section 30 of the Criminal Procedure Code. The Sessions Judge also hears appeals from the decisions of the Magistrates of the first class and also hears Criminal Revision Cases. The Deputy Commissioner or the Special Magistrates used to hear appeals from the decisions of the second and third class Magistrates until the recent amendment to the Criminal Procedure Code. The Subdivisional Magistrates of Hazaribagh, Giridih and Chatra try cases arising within their respective jurisdictions as far as they can and transfer the rest to the other Magistrates for disposal.

There were Deputy Magistrates, who were vested with extended powers under section 30 of the Criminal Procedure Code. Under the old Act, all offences not punishable with death were triable by Magistrates vested with powers under section 30 of the Criminal Procedure Code. There were previously, under section 30 of the Criminal Procedure Code, three Magistrates, viz., one at district headquarters, one at Giridih and one at Chatra.

According to the amended Act vesting of section 30 powers has to be made in consultation with High Court. At present there are no Magistrates trying Sessions cases under section 30 of the Criminal Procedure Code.

There has been no official separation of Executive and Judicial functions in this district. However, non-officially as a preliminary step some of the Magistrates have been set apart exclusively for Judicial work, although they are under the administrative control of the Deputy Commissioner.

Statistics of Criminal Cases from 4th April, 1949 to 30th September, 1953 are given in the following table.

Statistics of Criminal cases from 4th April, 1949 to 30th September, 1953.

Court.	Nature of cases.	4th April, 1949 to 31st December, 1949.		1950.		1951.		1952.		Up to 30th September, 1953.	
		Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.	Instituted.	Disposed of.
		Received by transfer.	of by transfer.	Received by transfer.	of by transfer.	Received by transfer.	of by transfer.	Received by transfer.	of by transfer.	Received by transfer.	of by transfer.
1	2	3	4	5	6	7	8	9	10	11	12
S. J. ..	Sessions	28	23	62	31	42	28	38	25	33	18
A. S. J. ...	Sessions	..	..	..	24	..	10	..	16	..	16
S. J. ..	Cr. Appeals	139	125	24	15	10	16	16	14	16	18
Cr. Motion	..	56	46	184	181	180	144	184	214	126	139
Ref. Cases.	..	2	2	40	43	70	55	81	91	68	66
				..	..	..	..	1	..	1	1

Like other districts offences such as murder, dacoity, robbery, burglary, theft, bad livelihood and suicides, etc., are committed in this district as well. But the speciality of the district is in the large number of forest cases. The number of forest offences increased enormously after the Government took over the forest administration under the Bihar Private Protected Forests Act. These offences are mostly compounded or are confessed.

There are a good number of cases under Motor Vehicles Act as the main communication of the district is by road and due to hilly roads accidents and other motor vehicle offences do occur not infrequently.

The mountainous nature of the district, the difficulty in communication and the easy availability of the raw materials afford the people an opportunity to carry on illicit distillation in the heart of the jungles with remote chance of detection. These excise cases are also great in number.

Number of illicit distillation cases are given below :—

Year.				Number of illicit distillation cases detected.
1948-49	...	...	...	1,139
1949-50	...	...	...	996
1950-51	...	...	...	708
1951-52	...	...	...	789

INCOME-TAX.

From the income-tax point of view this district is under the administrative control of the Commissioner of Income-Tax, Bihar and Orissa, Patna and the Inspecting Assistant Commissioner of Income-Tax, Southern Range, Ranchi. For appellate purpose it is under the jurisdiction of the Appellate Assistant Commissioner of Income-Tax, Ranchi. The district itself is controlled by the Income-Tax Officer with headquarters at Hazaribagh, whose jurisdiction extends to the entire revenue district. Generally there are one Income-Tax Officer and one Additional Income-Tax Officer with one Inspector and other subordinate staff. Periodical local survey is made by the Inspector to find out new cases fit to be taxed. Almost all mica cases are assessed in this district, with the exception of a few very big assessees, who are assessed outside the district. Some of these cases are assessed by the Income-Tax Officer, Special Circle, who has got jurisdiction over big cases of all the districts of Chotanagpur. He has his headquarters at Ranchi.

The major portion up to about 80 per cent of the income-tax revenue of this district is derived from the mica merchants. Lately there has set in an unusual slump in the mica market due to very little demand from the American market, which is due to the American purchasers having piled sufficient stock out of earlier purchases. This slump will have a very depressing effect on the income-tax revenue position of this district.

The number of assesseees and the net demand created for the 10 years are as below :—

Year.	Number of assesseees.		Net demand. Rs.
1943-44	...	1,091	4,69,467
1944-45	...	1,329	6,08,505
1945-46	...	1,600	14,40,142
1946-47	...	1,573	11,95,621
1947-48	...	1,827	5,88,389
1948-49	...	1,742	7,41,510
1949-50	...	1,302	7,02,364
1950-51	...	1,691	6,28,710
1951-52	...	2,518	16,89,355
1952-53	...	1,748	10,65,794

REGISTRATION.

There are at present four offices for registration of documents. The Deputy Commissioner is the District Registrar. The District Sub-Registrar at the headquarters assists the Deputy Commissioner in supervising the outlying registration offices.

The following Statement showing the total number of documents registered from 1903 to 1907 and 1947 to 1951 is given for purposes of a comparative study :—

Year.	Number of Registration.		Value of Land. Rs.
1903	...	6,013	10,95,794
1904	...	5,371	27,40,512
1905	...	5,779	12,35,496
1906	...	6,013	12,33,788
1907	...	5,539	13,81,572
Total	...	28,733	76,87,162

Year.	Number of Registration.		Value of Land.	
			Rs.	
1947	...	18,314	...	78,27,169
1948	...	17,744	...	55,07,639
1949	...	16,172	...	64,84,409
1950	...	18,992	...	73,87,437
1951	...	21,143	...	86,90,196
Total		92,365	...	3,58,96,850

The Statement given below shows the number of documents registered as well as the income and expenditure of each of the offices for the year 1952 :—

Registration office.		Documents registered.	Receipts.	Expenditure.
			Rs.	Rs.
1. Hazaribagh	..	8,384	78,834	16,526
2. Giridih	..	9,607	57,011	13,483
3. Chatra	..	1,577	9,213	2,997
4. Gola	..	5,101	26,348	9,020
Total		24,669	1,71,406	42,016

The average value of each document registered from 1947 to 1951 comes to Rs. 388 as against Rs. 268, the average value of each document registered from 1903 to 1907 and this increase in the average value of document clearly goes to show that there is an increase in the index value of lands which is the main cause for the increase in the number of registration due to the continual rise in the prices of foodgrains and other commodities of life.

EXCISE DEPARTMENT.

The sources of excise revenue are country spirit, outstill, *ganja*, *bhang*, *opium*, *pachwai*, *tari*, foreign liquor and other minor miscellaneous articles. Below is given, in brief, the rise in the excise revenue :—

Year.	Excise Revenue.			
				Rs.
1915-16	5,15,029
1938-39	9,84,656

Thus, in between the two wars the excise revenue, roughly, doubled. It went as high as Rs. 16,85,513 in 1943-44, in the year 1945-46 it went to Rs. 33,91,737. In 1951-52 the revenue from excise came to Rs. 38,88,209.

In 1951-52 from the different important sources revenue came as follows :—

	Rs.	
<i>Tari</i>	96,094	} (These items form about 11.1 per cent of total revenue.)
<i>Pachwai</i>	16,706	
<i>Ganja</i>	1,47,489	
<i>Bhang</i>	28,148	
Opium	87,514	
Miscellaneous ..	32,308	
Foreign liquor ..	23,146	}

Of the rest of the income, 88.9 per cent of the total revenue came from spirit. From foreign liquor came .6 per cent of the total revenue and from commercial spirit came .1 per cent of it.

The revenue from Excise depends upon the prosperity of the district which depends mainly upon the condition of mica, coal and lac market. The Department is under a Superintendent of Excise, who is assisted by an Excise staff.

CENTRAL EXCISE.

For the purpose of collection of Central Excise Revenue, Hazaribagh district comes within the Gaya Central Excise Circle having jurisdiction over the districts of Gaya, Hazaribagh, Palamanu and part of Shahabad.

The main excisable commodities grown or manufactured in Hazaribagh district are Benzol and Package Tea. There is very little cultivation of tobacco and the requirement of this commodity is met from supplies from North Bihar. Duty is collected by this Department on clearance of tobacco from warehouses.

Revenue from different Central Excise commodities in the district in the year 1953-54 was as follows :—

Commodity.	Production.	Revenue. Rs.
Tobacco .. ..	...	1,46,418
Benzol	6,258 gallons	4,085
Package Tea ..	176 lbs.	33

There were 827 tobacco licensees in the year 1953 in Hazaribagh district and one each for Benzol and Tea.

The main *hats* where tobacco is sold are Hazaribagh, Chatra, Jhumri Tilaiya, Samasria, Ramgarh, Dhanwar, Nawadah, Giridih and Bernee.

COMMERCIAL TAXES.

This Department is under the Superintendent of Commercial Taxes. There are six items of taxes which are under this Department. In brief they are given below :—

(i) Bihar Agricultural Income-Tax Act was passed in 1938. Income from this head is as follows :—

Year.	Total income.	
	Rs.	a. p.
1949-50	28,558	8 4
1950-51	55,470	13 11
1951-52	51,404	3 9

(ii) The Bihar Sales Tax Act was passed in 1944. Income from this item is stated below :—

Year.	Total income.	
	Rs.	a. p.
1949-50	16,94,928	4 2
1950-51	15,47,494	1 11
1951-52	15,95,106	7 9

(iii) The Entertainment Tax Act came into force in 1939. Income from this head is given below :—

Years.	Total income.	
	Rs.	a. p.
1949-50	2,56,360	7 2
1950-51	3,39,058	15 6
1951-52	3,50,990	0 3

(iv) From the Motor Spirit Act the district yielded the following revenue :—

Year.	Total income.		
	Rs.	a.	p.
1949-50	3,05,462	9	6
1950-51	4,48,866	1	6
1951-52	5,69,518	8	3

(v) The Bihar Electricity Duty Act was passed in 1948. From this source the income is given below :—

Year.	Total income.		
	Rs.	a.	p.
1949-50	12,807	9	9
1950-51	80,063	3	6
1951-52	63,434	13	6

(vi) The Bihar Passengers and Goods Transport Act came into force on the 1st April, 1950. Rate of tax is 2 annas in a rupee. Yield during 1950-51 to 1951-52 is as below :—

Years.	Total income.		
	Rs.	a.	p.
1950-51	2,65,226	3	3
1951-52	3,33,673	2	6

DISTRICT WELFARE OFFICE.

There is a District Welfare Officer of the rank of a Deputy Collector. Harijan Welfare and Aboriginal Welfare are main branches of the welfare activities. Stipends are given to the students, both Harijan and aboriginal and hostels are opened for them. Grain *golas* have been opened for the issue of grains to the aboriginals. They were used to be exploited by the money-lenders, now they can get loans from these *golas* in the form of grains. Thana Welfare Officers look after these grain *golas* and the welfare activities of the thana.

ELECTIONS AND PANCHAYATS.

There is a District Elections Officer under the Deputy Commissioner. In a democratic constitution, elections are the mechanism through which public opinion is expressed and people's Government is formed. There are thirteen Assembly and three Parliamentary seats, and

the district forms a unit for the 3 Council constituencies from Chotanagpur division and also forms a part in Santal Parganas-cum-Hazaribagh and Palamau-cum-Hazaribagh-cum-Ranchi Parliamentary constituencies. The District Elections Officer has the responsibility of maintaining the Electoral Roll up to date.

PANCHAYATS.

Many panchayats have been formed in the villages. The panchayats are under the supervision of a District Panchayat Officer who is of the rank of a Sub-Deputy Collector and Magistrate. (For details see the chapter on Local Self-Government).

CO-OPERATIVE SOCIETIES.

There are two Central Co-operative Banks in the district. A third Central Co-operative Bank was organised at Chatra in 1952 but it was liquidated in May, 1953. The area of operation of the Bank at Hazaribagh extends over the Sadar and Chatra subdivisions. The area of operation of the Bank at Giridih extends over the whole of Giridih subdivision. All the societies in the district are affiliated to the respective Central Co-operative Banks. The position of the Banks as on 30th June, 1955 is given below :—

Number of Banks.	Members.	Loans advanced during 1954-55.	Loans due.	Share capital.	Reserve and other funds.	Working capital.
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Hazaribagh Central Bank—1.	385	10,396	1,11,870	12,264	3,741	1,21,637
Giridih Central Bank—1.	242	25,893	74,375	6,175	54	1,08,244
Total—2 ..	577	35,789	1,85,743	19,189	3,795	2,39,881

A separate circle of Assistant Registrar, Co-operative Societies for the Hazaribagh district was created in 1936. Prior to this, Hazaribagh district formed part of the circle of Assistant Registrar, Co-operative Societies, Ranchi.

There are two Industrial Co-operative Societies in the district, one at Hazaribagh and the other at Giridih. These societies supply raw materials like iron and steel to their members for the manufacture of agricultural implements. Their membership stood at 84 in 1955.

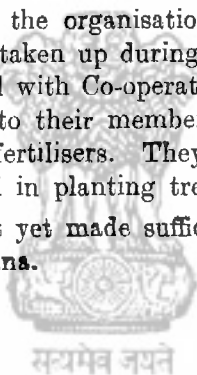
There are 6 Weavers' Co-operative Societies in the district. The membership stood at 367 and their share capital and working capital were Rs. 433 and Rs. 4,383 respectively.

There are 31 Vegetable Growers' Co-operative Societies. These societies mostly supply fertilisers and seed to their members and to some extent arrange for the sale of vegetable produced by them.

The number of Consumers' Co-operative Stores in 1955 was 17. They supply daily necessities of life to their members as well as to non-members.

An intensive drive for the organisation of Co-operative Societies in the Bagodar Thana was taken up during 1950-52. During this drive all the villages were covered with Co-operative Societies. These societies rendered valuable services to their members by providing them with credit, improved seeds and fertilisers. They also assisted their members in digging manure pits and in planting trees.

The movement has not yet made sufficient progress in the district except in the Bagodar Thana.



CHAPTER XVII.

DIRECTORY.

Badam.—Badam is situated towards the eastern end of the Karanpura valley in thana Barkagaon. It was for a long time the residence of the family which is now known as the family of Ramgarh Raja; and in A.D. 1642 a fine fort was constructed for Hemat Singh by a builder from Patna of which extensive ruins still remain. The place was, however, abandoned about 1670, and the family removed to Ramgarh probably in order to free itself from the undue proximity of the Muhammadans. About five miles to the south-west is Mahudi Hill, where there are caves, carved in the sandstone rocks, the earliest dating from about 1660, with an inscription in which reference is made to the Rajas of Badam.

After the British occupation a military road was made from Hazaribagh to Ranchi which passes through Badam. But the road lost its importance with the construction of the Ramgarh bridge and is now completely abandoned for the traffic purpose. There is a temple of Lord Shiva near the same place.

Bagodar.—It is on the Grand Trunk Road. A road branches off to Hazaribagh Road Station on the north (8 miles). There is a convenient Dak Bungalow. It has a middle school, a basic school, a post office, a police-station and a veterinary hospital. It is an ideal spot for motoring tourists for a break-journey. Bagodar was an important halting place for the military moving by the Grand Trunk Road in the nineteenth century.

Barhi.—It is a centre of the road transport system in the district. Grand Trunk Road passes through it. Patna-Ranchi road also touches it here. There are remains of a jail, a relic of the subdivision which was closed in 1872. There are besides a camping ground, an inspection bungalow, a police-station, a dispensary and also a post office. Four miles west of Barhi on the Grand Trunk Road has been built a modern bridge on the Barakar river in place of the one washed away in 1946. This has strategic importance. The inspection bungalow at Barhi is now the best in the district being electrified. The care-taker of the bungalow could be depended on for arranging camp food. At one time Barhi was an important place for military movement on the Grand Trunk Road. The post office at Barhi was once the Central Post Office for Bengal, Bihar and Assam.

Barkagaon.—Barkagaon is an important thana towards the eastern end of the Karanpura valley. The distance is only 16 miles from Hazaribagh town but the road has much deteriorated within the last 10 years. The road runs through the deep jungles on either side for a considerable distance. Big game is still available in the jungle. Barkagaon has a police-station, a dispensary, a forest range office and a middle school. It has a police beat at Tandwa, which touches Balumath thana of Latehar subdivision in Palamau district. The road from Barkagaon to Tandwa is worse. The Forest Department has opened a road from Barkagaon to Hendegir, a distance of about 14 miles. Hendegir is on the branch line from Barkagaon to Daltonganj. Buses ply between Hazaribagh to Tandwa but the road conditions often wear the motor vehicles out of gear. There is a District Board dak bungalow at Barkagaon with some furniture but no arrangement of food. The Forest Department contemplates to construct a rest house at Hendegir. The road is an important link between Hazaribagh and Palamau district.

Bermo.—It is about 52 miles from Giridih and is situated on rail-head. It is the headquarters of two groups of Railway collieries, viz., Kargali and Bokaro. There is also a thermal power-station of the said Railway collieries. The present population is near about 40 thousand. It is one of the very few collieries which has got open pit quarries. It has schools, dispensaries and other modern amenities.

Bhaduli.—It has Buddhist relics. There is an image of Sahasralingam Shiva at the top of which there is a cavity in which water percolates nobody knows from where. A big image of goddess Tara is also there. There is an inscription on the pedestal.

It is 22 miles north-west of Chatra on the Chatra-Chauparan road. The place is only a few hundred yards from Itkhor police-station.

Bhurkunda.—It has got a State colliery. It is on the branch line of the Eastern Railway and 14 miles by road from Ramgarh.

Bhendra.—It is a small village in Nawadih police-station situated at a distance of about 7 miles east of the thana. The total population is about 2,000. The majority of them are Lohars or blacksmiths. They are engaged in preparing cutlery, swords, spades, daggers, knives, ploughshares and spears. When cheap electricity will be available from the Damodar Valley Corporation Power Station, this village is likely to develop flourishing cottage industries. Thousands of rupees worth of cutlery goods are manufactured here every month and sent to Calcutta.

Bichkilla.— It is a *dah* or water-reservoir in river Lilajan. It is seven miles west of Chatra, three miles of which are motorable and the rest is a foot track. A picnic spot but hardly resorted to owing to bad accessibility.

Bokaro.—Until recently Bokaro was a small village within a jungle. But with a thermal power station and a dam built across the Damodar river Bokaro has become an important place and a township with a future.

Located on the bank of the Konar river just below its confluence with the Bokaro, the thermal power station of the Damodar Valley Corporation will firm up the seasonal hydro-electric power from the Damodar Valley Corporation dams. The site is seven miles by road from the Bermo railway station on the Barkakana Loop of the Eastern Railway, while Bokaro, a smaller station on the same line, is at the site itself.

The plant uses low grade coal (with approximately 27 per cent ash content) drawn from the Corporation's own mines situated about five miles away. The coal is conveyed to the power station by an aerial ropeway, so as to minimise the cost of transport. The power house is designed on the unit system each turbogenerator being supplied with steam from two boilers and having its own step up transformer.

The dam across the Konar, 12 miles upstream, will supply all the cooling water necessary for the plant. Sufficient local storage is provided by a concrete barrage with lift gates, constructed departmentally at the site of the power house. Bokaro and Konar are connected by a new road built by the Corporation.

A township capable of accommodating about 1,500 persons has been built for the operating personnel. It is provided with all modern facilities, such as water and electric supply, sanitary installation, hospital, school, rest house, post office, access roads, etc. The rest bungalow has all modern conveniences and ideally situated.

Plant and equipment were ordered at the end of February, 1949 and work on the power station proper started in January, 1950. The station is now on commercial operation, the first unit having been commissioned on the 21st February, 1953.

Statistical Data.

Capacity of plant—

Initial .. 150,000 KW

Ultimate .. 200,000 KW

Barrage—

Type—solid concrete with sluice gates.

Length—Gated portion 678 ft.

Emergency spillway—200 ft.

Generating Plant —

Turbo-generator sets—3 in number each. 50,000 KW (Normal).

(Generators are hydrogen-cooled). 57,000 KW (Maximum).

Barrage —

River bed level—R. L. 724.

Normal operating level—R L 748.

Maximum flood level—R. L 757.

Boilers —

Boilers—6 in number capacity each. 300,000 lbs/hr.

Steam Pressure .. 895° lb/ sq in.

Steam temperature .. 910° F.

Sluiced openings—Length—570 ft.

Concrete—1,100,000 cubic feet.

Storage capacity at R. L. 748—60,000,000 cubic feet.

Power House—

Height 113 ft.

Length 444 ft.

Breadth 168 ft.

Maximum design flood at Bokaro Barrage—2,80,000 cusecs.

Total catchment area above Bokaro Barrage—700 sq. miles.

No. of gates 19.

Size of gates—13'0" × 30'0".

The Bokaro Thermal Station will supply 98,20,00,000 KWH of electrical energy per annum (3 units fully developed).

Chatra Subdivision.—When the district of Ramgarh was created in 1780 Sherghati now in Gaya Sadar subdivision, and Chatra were alternate headquarters, and this arrangement continued till 1834. With the creation of the Hazaribagh district in 1834, the headquarters was fixed at Hazaribagh; but Chatra, where a Munsifi was created, remained for many years the trading capital of the district. It lies on a comparatively level tract between the upper plateau of Hazaribagh and the tangled mass of rock and ravine which form the western limits of the district, and was the open highway from Gaya and the Ganges valley to the south and west of Chotanagpur. As such it was the natural recipient of the country produce of Palamau, and the Tributary Mehals, and the centre from which the commodities of the north were distributed. The construction of railways diverted this trade and Chatra was left with a comparatively limited field for its commerce. Lac, timber and catechu are the principal articles of trade now. At the Dasahara festival a large business is done in cattle at Chatra cattle fair. In Falgun Purnamasi another fair is held at Lawalong for cattle. Cattle fairs are also held at Kunda, Belgada and Pitiz.

A weekly market is held at Simaria which is a very important market for supply of rice to Chatra subdivision and also to Hazaribagh. A weekly market is held on every Thursday at Maharajganj in Chauparan police-station at a distance of $1\frac{1}{2}$ miles from the Grand Trunk Road at Chauparan by the side of the Chatra-Chauparan road. Foodgrains and cattle are sold in this market.

In November, 1914 the Chatra subdivision was opened with an area of 1,545 square miles. Mr. E. Lister, I.C.S., who compiled the old District Gazetteer of Hazaribagh published in 1917 was the Deputy Commissioner of Hazaribagh at that time and took keen interest in the creation of this subdivision.

There are six thanas at present, viz., Chatra, Simaria, Itkhorī, Chauparan, Hunterganj and Pratappur. The population of the subdivision according to the 1951 Census is 2,62,531 as against 2,63,341 in 1941.

The administrative staff consists of the Subdivisional Officer, who is also the Munsif, assisted by a Deputy Collector in-charge of Treasury and one Sub-Deputy Collector in-charge of Chaukidari. There is a Sub-Registration Office. There is a Subdivisional Hospital in the charge of an Assistant Surgeon. There is also a Lady Assistant Surgeon. The Assistant Surgeon looks after the sub-jail administration also. Chatra is also the headquarters of the Chatra Divisional Forest Officer.

Chatra subdivision is a picturesque subdivision with forests, waterfalls, deep gorges and other beauty spots. The forests have attractive big game shootings, particularly in Pratappur area. Now the subdivision has got fairly good roads. Chatra town is connected with Gaya, Chandwa in Palamau district, Chauparan on the Grand Trunk Road and Hazaribagh by buses, a large number of which run daily.

Chatra is about 43 miles north-west of the district headquarters at a height of 1,400 feet. It is connected with the railway at Kodarma railway station by a metalled road of which the stages are as follows :—

- (1) Chatra to Itkhorī, 22 miles with the wide and bridged Mohani river at the 19th mile from Chatra. There is an inspection bungalow at Pitiz, about 15 miles from Chatra. The bungalow has some furniture but no arrangement for food.
- (2) Itkhorī to Chauparan, 10 miles, Chauparan is on the Grand Trunk Road and has an inspection bungalow but no arrangement for food.

- (3) Chauparan to Barhi, 12 miles. Barhi is on the Grand Trunk Road and lies in Sadar subdivision. The road to Kodarma is in direct line to the Hazaribagh-Barhi road partly re-aligned recently by the Damodar Valley Corporation after the completion of Tilaiya Dam Lake.

From Hazaribagh, the district headquarters, one can go to Chatra either via Barhi-Chauparan or by the direct route via Lepo and Simaria. This is the shorter route and covers 43 miles. The small streams on Chatra-Lepo-Hazaribagh road are bridged excepting one at the last extremity of this subdivision which has a causeway. The third route is via Katkamsandi with a number of streams with heavy sand. Chatra is also connected with Gaya by a road via Jori Ghat, Hunterganj, Gosaindih and Sherghati. This road has been completed in 1956 and is now under the Public Works Department. This is a picturesque road with hills, forests and river passing by and the sight of a big game is not unusual.

There is a dak bungalow at Hunterganj but there is no arrangement for food supply. Southward there are roads to Balumath and from there to Doisanagar in Ranchi. The road leading to Balumath and Tori is a fair weather road. When the streams are bridged and the road is repaired it will be a provincial highway connecting Ranchi with Gaya via Lohardaga, Balumath, Chatra, Hunterganj, Dobhi and Gaya. The opening of this first class road will have a great effect on trade and commerce.

There is a furnished District Board dak bungalow at Chatra but there is no arrangement for supply of food. This bungalow is, however, situated about a mile and a half away from the town and the courts. At Chatra itself there is a small Public Works Department rest-shed which is well furnished but there is no arrangement for supply of food. The rest shed is primarily meant for the Public Works Department Officers.

It may be mentioned that in 1857 Sepoy Disturbance Chatra was the scene of a small but locally important engagement between the insurrectionists and the British troops. The Ramgarh Battalion had mutinied at Hazaribagh and Ranchi; and though the sepoys received very little local support they were strong enough to compel the retirement of the Government Officials, and for two months they were masters of the situation. They then decided to leave the province by way of Chatra, and join Kuar Singh at Bhojpur. At Chatra they were attacked by a mixed force consisting of a portion of the 53rd Regiment of British troops, and a detachment of Rattray's Sikhs, numbering in all 320 men. Apparently they were to some extent surprised; but they

took up a strong position on the brow of a hill, and resisted stubbornly; for in the orders conferring on them the Victoria Cross Lieutenant J. C. C. Daunt of the 70th Bengal Native Infantry and Sergeant Dynon of the 53rd Foot are stated to have acted with "conspicuous gallantry in capturing two guns by pistolling the gunners, who were moving down the detachment with grape". The rebels lost 150 men killed, and all their guns and ammunition, and those who scattered and escaped ceased to be a military force. There is a grave-yard in Chatra where are buried the Europeans who were killed in this fight.

Although the town of Chatra was for 54 years practically the headquarters of British administration in Chotanagpur, it has been declining in prosperity. The main reasons of the decline are a lull in indigenous trade and commerce and the opening up of the Barun-Daltonganj Railway which has diverted the trade and commerce from Chatra but it is expected that when the Gaya-Ranchi road via Chatra is constructed the decline will stop. Chatra town has a Municipality with an area of 3.78 square miles. There is no holding or latrine tax levied but there is a personal tax depending on the property of the assessee within the Municipality at $1\frac{1}{2}$ per cent. The town has a high school, a girls' middle school, a social club and a small library.

Duari.—It is twenty miles east of the Chatra on the Gidhour-Katkamsandy road. The road is motorable. There is a hot spring in river Balbal near this village. The water is supposed to have curative effect for skin disease.

Dhanwar.—This is an old village about 19 miles north-east of Hazaribagh Road Station with which it is connected by a road intercepted by three unbridged rivers. It is 38 miles north-west of Giridih and is connected by a metalled road. The Raja of Kharagdiha had been living here since long. The Raja had subjugated the Tikaits under the Kharagdiha Raj and Dhanwar being the headquarters of the Raja, acquired importance in the past. The Estate of the Raja has now been taken over by Government under the Bihar Land Reforms Act.

It is the centre of a small trade in hide and skin, brass and bell metal industry. There is a District Board inspection bungalow, a high school, a basic school up to middle standard, a District Board dispensary, a veterinary dispensary, a police-station, and a Circle Office for revenue and welfare work.

Ghorsimar.—This is about four miles from Satgawan and is situated on the bank of river Sakri. There is a temple of Lord Shiva. In this temple one finds relics of an older temple. There is a door

frame of sand-stone of some old temple. This has been fixed to this temple. On the door frame something indecipherable is written in Kutila character. Near about the temple are numerous idols of various deities such as Lord Shiva, Lord Vishnu, Lord Buddha, Lord Ganesh, Goddess Durga and the like. These idols are all made of sand-stone. They are all said to have been excavated from underground. There is no recorded history of the place. Near this village is a village called Deoghar. Some writings on plain papers referring to certain settlement of disputes regarding worship in the temple between *pandas* take us back to the time when this place lay in Satgawan Gadi within Sherghati district or within Ramgarh district. They speak of the existence of about 100 temples there. In the 18th century there existed 100 temples at Ghorsimar. Who built these temples nobody knows. About 200 yards away is a hillock on which are to be found traces of brick-built houses. These houses had stairs leading to the river. The bricks appear to be of old type. At the foot of the hillock are also traces of brick-built houses. It is said that the local chief had his fortress on the hillock which commanded a view of the Sakri river and that his supporters had their houses at the foot of the hillock. These archæological remains have not been properly studied. The remains appear to be about three to four hundred years old and not older. They depict a synthesis of Buddhism and Hinduism.

Giridih.—Giridih is the headquarters of the subdivision since 1881. It is 72 miles from Hazaribagh. It is connected by provincial roads and there is a branch railway line of the Eastern Railway from Madhupur to Giridih. Towards the north is the river Usri which has now been bridged. The river prevented the growth of the town beyond the Usri. Construction of cause-way across this river had been sanctioned under the first Five-Year Plan and the work has been completed and is in use. A Degree College has been built across the river and it is expected that in the next few years the growth of the town will extend to the opposite side of the river Usri. Already a number of people have built houses and bought lands for the purpose. During the rains the two banks are used to be cut off and transport becomes difficult. During the dry season towards the north runs a road via Bengabad and Chakai to Deoghar. Buses ply on this road in the fair weather. On the other side it is connected by good roads. The Barakar which used to be a problem is now bridged. A coal-tarred road connects Giridih with the Grand Trunk Road at Dumri. Another runs via Kharagdiha and is called Assam Access road. From Kharagdiha branches off another road leading to Gawan and Nawadih. From Jamua runs another road leading to Kodarma and Gaya. The importance of Giridih began with the working of the collieries near

about. The collieries Kurharbaree, Serampore and Baniadih brought the railways in 1871 up to Giridih and Giridih became increasingly more important than Pachamba where the headquarters were located. In 1881 the headquarters of the subdivision was shifted from Pachamba to Giridih.

The collieries continue to maintain the importance of Giridih and mica has come into importance all the more. Mica is exported to foreign countries and there is a big trade in mica which is of international importance. No mica mine is to be found near Giridih but all important mica firms have their headquarters at Giridih.

The population of Giridih town has grown considerably. The population according to 1951 Census is 29,167 as against 13,593 of 1941 Census. The expansion towards the north is restricted by the river Usri, towards the south by the collieries and so Pachamba and Giridih which at one time were 3 miles apart are now linked together. There is one Municipality for Pachamba and Giridih taken together. The Municipality has an area of 3.06 square miles. The town is electrified but the water problem remains and specially during the hot season when the wells dry up. When the river Usri dries up, the water problem becomes acute. Government had sanctioned and allotted funds to the Municipality for construction of water works. Necessary investigation for locating the water reservoir was made and the construction work has been completed.

There is a subdivisional hospital with a male and a lady Assistant Surgeon with separate wards for males and females. There are several private medical practitioners. There is also a veterinary hospital. The collieries have their separate hospitals. There are three high schools for boys and one high school for girls. There is a District Board dak bungalow and a Public Works Department inspection bungalow and both are in the town. There are two cinema houses. At about 6 miles from Giridih there is a small waterfall in the river Usri. Every year on Kartic Sudi Astami a *mela* is held at Pachamba and people from the interior visit the *mela*. Giridih has a healthy climate and people from outside come there for a change.

Giridih subdivision has an area of 2,046 square miles. The present population of the subdivision is 7,00,202 according to the 1951 Census, as against 6,48,447, population in 1941.

There are 13 thanas. The subdivision is well connected by roads and there are several buses that run on various routes. The subdivision has become very important because of coal and mica industries.

Gola.—It is situated in the south of the district about 15 miles from Ramgarh. It serves as a centre for the receipt of country produce from the Damodar valley and for the distribution of goods imported by rail. It has a sub-registration office, a high school, a dispensary, a post office and a dak bungalow.

Gomia.—It is 48 miles from Hazaribagh surrounded by forests. It has a railway station, a police-station and a dispensary. It has been selected for setting up an explosives factory by the Imperial Chemical Industries. Construction of the buildings has been taken up now.

The Grand Trunk Road.—The Grand Trunk Road was completed in the district of Hazaribagh about the year 1838, replacing the military route to the north-west made about 1780 from the neighbourhood of Chas in Manbhum through Gomia, Chatra, Hazaribagh and Kanha Chatti to the Dhangain Pass and thence to Sherghati. It was not, however, till ten years later that much progress was made with the bridging of the new road; for when Dr. Hooker visited the Suruj Kund hot springs he found in progress the building of the bridge over the Barahata, the river nearby. The road enters the district at the 193rd mile from Calcutta, near Munia Ghat and enters Gaya at Gauri bridge at the 268th mile. Till 1858 the rail head from Calcutta was at Raniganj; and the Grand Trunk Road had been the most important means of military communication between the lower provinces and the north of India during the preceding twenty years. Since 1858 it had dwindled in importance with the construction in succession of the Loop Line, the Chord Line and the Grand Chord Line. The latter runs roughly parallel to the road.

The Grand Chord Railway Line was opened in February, 1907. In the last District Gazetteer it was mentioned that since its opening the road possessed merely a local importance. This observation does not hold good now. With the development of tourist traffic by cars and buses the Grand Trunk Road has become very important and every day hundreds of cars and buses and trucks rush past the Grand Trunk Road. Besides passengers a good deal of commercial traffic is carried on through motor vehicles on the Grand Trunk Road.

The opening of the road led to a great change in the distribution of the police and in a short time thanas were opened at Dumri, Bagodar and Barhi and the intervening portions of the road were protected by posts of *digwars* and patrolled by mounted police. Colonel Dalton, writing in 1872, stated that "Hazaribagh was always notorious for its dacoities. Formerly in the Mughal days the Kharagdiha jurisdiction was the worst part of the district for this crime;

afterwards the Grand Trunk Road attracted attention, but a strong road police was established and great efforts made, not always with success, to render it safe for travellers. The transfer of traffic to the railway reduced the attraction and though the police were also reduced, the road is still fairly patrolled and the few *sowars* allowed are of great value. " In the great days of the road it must have presented scene of extraordinary interests, with the regiments pressing to the Afghan war, and the pilgrims crowding to Jagannath and the *chattis* or permanent bazar attached to the camping grounds of the troops having a busy trade.

The Grand Trunk Road served a great purpose in the nineteenth century for the movement of the military. The usual stages were at Dumri, Bagodar, Barabhetha, Barhi and Chauparan where there were reserved camping grounds. The road again served a great purpose in the twentieth century for similar purposes when the Second Great War broke out. Conveys of military vehicles were a common feature on the Grand Trunk Road in those years. At the moment with the availability of electricity due to the Damodar Valley Corporation and the development of motor vehicular traffic, the road has become extremely important. Petrol is available at near distances throughout the road. The dak bungalows are also very helpful to the travellers.

The road enters the district 6 miles west of Topchanchi and is overhung for miles by the great and imposing mass of Parasnath Hill. After Nimia Ghat (198) the Grand Chord line is crossed at mile 200 and at Isri (202) the railway station for the pilgrims is passed on the north side. At Dumri (203) the dak bungalow is reached where rooms and food can be obtained and Parasnath Hill or Madhuban visited. The metalled road running north by the bungalow goes to Girisih, 26 miles away, of which the first 18 down to the banks of the Barakar, pass through the beautifully wooded lower spurs of Parasnath.

Hariokhar.—There are two waterfalls with big reservoirs of water at the foot. This place is about 22 miles to the north-east of Chatra. The road is *katcha*.

Hazaribagh.—Hazaribagh town is situated in 23°59' east longitude near the centre of the higher plateau at a general elevation of two thousand feet. In the immediate neighbourhood a few rocky hills break the landscape, of which Chendwar or Seotagarha Hill is 2,815 feet high.

The town is the headquarters of the district as well as of the Sadar subdivision. The population in 1911 mentioned in the last District Gazetteer published in 1917 was 17,009. The population according to

1951 Census is 33,812 as against 24,918 of 1941. The municipal area of the town is 7.13 square miles. The town is the meeting place of three first class roads, of which one connects it with Ranchi, fifty-eight miles away and the others with Bagodar (32 miles) and Barhi (23 miles) respectively on the Grand Trunk Road. There are a number of motor services connecting Hazaribagh with Hazaribagh Road Station (41 miles) on the Grand Chord Line, Ranchi road and Ramgarh town railway stations and Gaya, Patna, Daltonganj, etc. Hazaribagh with its cool climate, pleasant scenery, and excellent roads has been very popular with visitors, especially in the rains and the autumns. Every year a large number of visitors come to Hazaribagh and the district has attracted every year a large number of motorists. From time to time, the survey of railway connection from Hazaribagh to Hazaribagh Road has been mooted but the plan for the construction of a railway line has not materialised.

The town has a dak bungalow near the Church, an inspection bungalow and a Circuit House. There is a Damodar Valley Corporation Rest Bungalow. There are some hotels but the standard is poor. The town has developed enormously because of the activities of the Damodar Valley Corporation. It gets its supply of electricity from the Damodar Valley Corporation and the State Electric Supply Company. Drinking water is supplied to the town from the Chharwa dam lake 4 miles to the west.

There are a number of educational institutions for both boys and girls. St. Columba's College has imposing buildings and is one of the noted Degree Colleges in Bihar. Amongst other institutions, mention may be made of Mount Carmel College for girls, St. Xavier's schools for boys and girls, Zila School, Anand High School, Government Girls' High School, Hindu High School, St. Columba's Collegiate High School, Hazaribagh Girls' Middle School (Bengali Girls' School), Kiran's School, Hasandganj and Lakshmi Muslim Girls' School. Hazaribagh. The town has a Sadar Hospital under the Civil Surgeon who is assisted by a male Assistant Surgeon, a lady Assistant Surgeon and other doctors. St. Columba's Women's Mission Hospital at Hazaribagh has a great reputation for the treatment of women in Chotanagpur Division. There is a Reformatory School and a Central Jail. There are several Christian Missions working in the district with their headquarters at Hazaribagh. There is a big *goushala* maintained by the Jains. There is a lake in the town with winding roads all round and offers delightful walks. The town has a very old established station club, several other clubs, hostels, restaurants and cinemas.

The town owes its existence to the raising of the Ramgarh Battalion about 1780 and the decision to station it permanently near the villages of Okni and Hazari, on the road from Chatra to Ichak, which had become an important place after the zamindar of Ramgarh had made it his residence in 1772. Rennell's map published in 1779 shows the road and the present town appears therein as Ocunhazari. In 1834 it was made the headquarters of one of the new districts which were then carved out of the old conquered provinces of Ramgarh.

The town has a Municipality, the details of which will be found in the chapter on Local Self-Government.

Along with the creation of the Province of Bihar and Orissa in 1912, the Police Training College for Bihar and Orissa was established at Hazaribagh. Details of the Police Training College will be found in the chapter under Education.

Hazaribagh Sadar subdivision now covers about 3,404 square miles with a population of 9,74,494 according to 1951 Census. The population of the Sadar subdivision in 1941 was 8,39,551. It has 13 police thanas.

Hazaribagh Road Station (Saraiya).—It is on the Grand Chord line of the Eastern Railway. It was opened in 1907 and is connected by a metalled road with the Sadar Headquarters. The market is known as Saraiya. It has developed recently. It has a high school, dak bungalow and a dispensary. There is an *ashram* at Saraiya. The Eastern Railway has opened a rest house for the subordinate railway staff. Many people prefer the water of this place to the water available in Hazaribagh town.

Ichak.—It lies about six miles to the north of Hazaribagh and two miles to the east of the Barhi road. Formerly it was the seat of the Ramgarh Raj, but after the removal of the headquarters to Padma, its importance has dwindled down. It has a union board, a police-station, a post office and a high school. The remains of the old *garh* of the Raja can still be seen.

Jainagar.—It is a police-station. It is 10 miles from Kodarma. A number of villages in this thana were submerged because of Damodar Valley Corporation Dam.

Kharagdiha.—It is 26 miles north of Giridih on the Assam Access Road. This Assam Access Road runs via Chakai and there is another road leading to Gawan and Nawada. It was in the past the centre of

Kharagdiha *gadi* and roads connected this place to important places. It had, therefore, business importance. The trade declined and passed on to Mirzaganj and Pachamba. There was a Munsifi and thana headquarters at Kharagdiha. The Munsifi continued for some time. The thana was finally transferred from this place in 1913 and Kharagdiha lost all vestiges of its past glory. In the premises of Kharagdiha thana there lived a Sadhu called Langta Baba. This Sadhu is said to have come to Kharagdiha about the year 1850. He used to live naked and did not observe any caste distinction. He was respected by Hindus and Muslims alike. It is said that he had great spiritual powers and that he did not accept anything from anybody and used to distribute whatever he got amongst the poor. He was however addicted to smoking *hukka*. Many stories are current about the spiritual and magical powers of Langta Baba. Langta Baba died on the 25th January, 1910 and his memory is commemorated every year on Paush Purnamashi. Thousands of people from the villages come to the Samadhi of Langta Baba and give their offerings in the shape of *chaddar*, tobacco and *hukka*. Both Hindus and Muslims worship him alike. One high school after the name of Langta Baba has been opened at Mirzaganj.

Khaya-Banaroo.—This is a beauty spot about six miles south-west of Chatra town. It is accessible by means of a metalled road for four miles on the Balumath-Sherghati road and then by a *katcha* fair-weather road and then one mile on foot. The scenery is exquisite with deep forests and hills. The Banaroo stream cuts its way through the rocks and at places has cut terraces with balconies out of stone walls on its banks. The deep gorge with numerous shapes in the stones that form the wall of the two sides of the gorge is a rare sight. At places it looks as if the portions of trees have been transformed into rocks. There are some species of *Anogeisis* trees by the side of the gorge and the bed of the river.

The rocky river bed is also peculiar. The rocks are granite gneiss, sand-stone, calcareous hardened clay stone known as calcareous argillite, lime-stone and quartzite. A forest bungalow on a suitable high place near the gorge is under contemplation of the Forest Department.

Keri Dah.—It is five miles north-west of Chatra, a portion of which is jeepable. This waterfall is between two hillocks and the fall is in three parts. This is a place of great scenic beauty.

Kodarma.—It is 42 miles north of Hazaribagh town. It has a railway station, a police-station, a high school, a post office, an inspection bungalow and a dispensary. The area is very rich due to trade in mica mines. The town has developed recently on account of the great

profits in mica business during the last war. The town has been electrified recently from the Damodar Valley Corporation power resources. Jhumri Tilaiya is an adjoining area in which the market is situated. It has a notified Committee as well.

The area of Kodarma is of antiquarian interest. Kodarma Hill is known after the name of Kardam Muni. The neighbouring hills of Rishyasringha Singhar, Markendey at Dhorakola, Durbasa at Debar are only a few miles off from Kodarma and are ancient places.

In British administration the estate of Kodarma was confiscated due to the insubordinate and militant behaviour of its owner.

Since the later half of the nineteenth century Kodarma began to grow in importance first by the discovery of coal in Giridih side and then by the extension of the rail roads. With the development of electrical industry in foreign countries mica was in growing demand and this gave impetus to the discovery of fresh fields. In 1907 Grand Chord Railway line was opened and Kodarma came to be of direct importance to outside world having a railway station here.

Mica is known to have been extracted from this locality since ancient times, mainly for decorative purposes by a class of aboriginal people known as Labanas whose primitive skill in rock cutting was remarkable and their knowledge of mica veins was like an intuition. Hard solid rocks they used to heat and suddenly pour cold water which could cause cracks in the rock and allow easier chiselling. All the big mines of repute of the present day are said to have their origin from Labana pits. Their descendants have now lost the ancestral art but they are yet the best miners and belong to the Scheduled Castes of Musahar and Rajwar. Mica ash (*abhra bhasma*) was used in Ayurvedic medicine.

Kodarma has a great future, particularly, because cheap energy will be supplied from the Tilaiya Dam. But unfortunately the mica business depends, at the present, entirely on foreign markets. Brazil, South Africa and Rhodesia are slowly becoming competitors of Indian mica.

Konar Dam.—Konar, the second of the four multi-purpose dams included in the first phase of the Damodar Valley Project, is situated in the Hazaribagh district, across the Konar river, 23 miles above its confluence with the Damodar. The nearest railway stations are

Hazaribagh Road on the Grand Chord and Gumla on the Barkakana Loop of the Eastern Railway. The site is connected with both stations by metalled motorable roads.

The dam, which will provide perennial irrigation in the Lower Valley, generate hydel power and supply 400 cusecs of cooling water to the Corporation's thermal power station at Bokaro, is of the composite type with a central concrete gravity-type spillway, fitted with gates in the river bed and earthen embankments on the flanks. An underground power station 450 feet below the bed level, with a seven mile long tailrace tunnel, for the generation of hydel power from this reservoir, will be taken up later.

STATISTICAL DATA.

River Basin.

Catchment Area—385 sq. miles.

Inflow :

Maximum observed (1950)—20,645 cusecs.

Average (1950)—560 cusecs.

Annual Rainfall :

Maximum—82 inches.

Minimum—38 inches.

Average—53 inches.

Power Plant.

Installed Capacity—40,000 KW.

Head :—

Maximum—541 ft.

Nominal—5000.5 ft.

Minimum—471 ft.

Operating Tail Water Level—RL 858.00.

Hydro-electric Generation—191,000,000 KWh per annum.

Dam :—

Height :

Above River-bed—160 ft.

Above Deepest Foundation—190 ft.

A portion of the concrete section overlaps the earth dam, reducing the over-all length.

Length :—

Concrete Section—910 ft.

Spillway Section—359 ft.

Right Concrete Abutment—254 ft.

Left Concrete Abutment—297 ft.

Right Earth Section—4,000 ft.

Left Earth Section—5,800 ft.

Earth Dyke Section—2,400 ft.

Total (left)—12,760 ft.

Width :

Maximum at Spillway Base—147 ft.

Apron section—263 ft.

Kunda Cave.—The remains of the old Kunda palaces are still found at a distance of about three-fourths of a mile from the present Kunda village. The palace might have been erected either towards the end of the 17th or beginning of the 18th century A. D. The walls are still standing though in a very much dilapidated condition, still attracting a large number of visitors from outside. But the main centre of attraction for the illiterate public of places far and near is a cave situated at a distance of about half a mile from the remains of the old palace probably dug shortly after the building of the palace. A narrow uneven path runs downwards in the southern portions of the palace and leads to the cave. A shallow stream, which can be crossed without letting the feet touch the water surface, washes the base of the cave.

The cave is a hollow made at the base of a part of the hill, not so high. The entrance into the cave is very narrow and one cannot get inside without contracting one's body and bending one's head.

There is a central hall inside the cave, not so high to enable one stand erect, often used by big visitors as resting floor. Two small hollows connected with and having their only passage with this central hall, are completely dark. A big Shivaling is installed just in the middle of one of the two hollows. The other one was used, they say, by a hermit who lived there some fifty years ago, as the sleeping room.

On the fourteenth of Falgun a large number of people come to offer holy water to Lord Shiva. They sing holy songs and seasonal ones accompanied with musical instruments.

Inside the central room of the cave something has been written by carving over the walls not very indistinct though one cannot decipher it.

Kuluha Hill.—Kuluha Hill lies about six miles south-west of Hunterganj. At Hunterganj one has to cross the Lilajan river which is now bridged and jeep or walk through the uneven track to the foot of the hill. The height of the hill is 1,575 feet and from the top commands an excellent view. The top of the hill is quite distinctive and is known as ' *Akash Lochan* ' (sky eye). There are some ancient temples; the most important of which is a temple of Kali known as Kauleshwari Devi. On Basant Panchmi and Ram Naumi days, a large number of pilgrims flock to the hill top for worship. Sacrifice of goat in front of the temple is common.

The temples and the images are now a place of pilgrimage for the Hindus. Dr. M. A. Stein, however, who visited the hill in 1900, was satisfied that they were built by the Jains, who venerated it as the birth-place of the tenth Tirthankar, Sitala Swamin, and frequented it till about one hundred and fifty years ago. He felt that it was curious that it was now entirely unknown to the ordinary Jains and is associated by the local Hindus with the Pandava brothers. There are several Jain images on Kulua Hill. One of the specimen is a rock cut group of ten Digambari Jain Tirthankaras.

In a cave, there is a small image which is now worshipped by the Hindus. The image is clearly that of Parsvanath with a hood over the head. On a closer examination the hood looks like the hoods of several snakes. The Dhyani Mudra image of Parsvanath, the 23rd Jaina Tirthankara with the snake hood over the head is common. From another cave, it is understood, three Jaina images were removed only a few years back. The villagers say that the images were taken away by the Jains to Gaya for worship.

The climb to the top of Kuluha Hill or the temple of Kauleshwari Devi is rather steep and there are no steps. There is a big tank near the temple with good water. It is, however, preferable to carry water while going up. There is no rest bungalow but the surroundings are excellent for a picnic.

Lapanga.—There is a glass factory known as Sodepur Glass Factory here. This place is also known as Bhadaninagar after the name of its founder Sri Guru Sharan Lal Bhadani. The factory is still in the stage of stabilisation. This is very close to Bhurkunda Railway Station (Eastern Railway). It is reported to be the biggest glass factory in the country producing glass sheets. The glass factory has now been taken up by a Japanese firm.

Maloo Dah.—It is another waterfall about five miles west of Chatra. Up to three miles the road is motorable and the rest has to be

done on foot. The water falls from a height of about 50 feet without touching the sides of the hillock anywhere. It has been cut in a semi-circle with steep walls.

Mandu.—It is at a distance of 17 miles from Hazaribagh town on the road leading to Ranchi. It has a police-station, a post office, a middle school, and an inspection bungalow.

MELAS.

A large number of *melas* are held throughout the district of Hazaribagh on different occasions. The *melas* have lost much of their economic utility now with the growth of the townships and markets. Development of communications has also brought commodities within the easier reach of the villages. Yet these *melas* are attended by thousands of villagers and people still look upon the *mela* day with great anticipation. Some of the bigger *melas* have amenities like cinemas and circus shows. Remnants of the past like cock fight and partridge fight are still common in the *melas*.

Some of the important *melas* are as follows :—

Sadar Subdivision.

- (1) Surajkund under Barhi P.-S.—3 days.
- (2) Ramgarh under Ramgarh P.-S.—in the month of October for 2 days.
- (3) Rajrapha under Gola, P.-S.—Aswin Shukla Dasmi.
- (4) Silwar Pahar under Salar P.-S.—Asarh Shukla Dwitya.
- (5) Narsinghsthan under Sadar P.-S.—Kartik Purnima.
- (6) Sitagarha under Sadar P.-S.—Gopastami.

These are the usual *melas* where a lot of things are sold and purchased.

Giridih Subdivision.

(7) *Pachamba Goshala Mela.*—This is held in the month of Kartik Gopastami. The trustees of the local Goshala also organise cattle exhibition and hold well-attended meetings for cow protection.

(8) *Jharkhandi Mela.*—This *mela* is held on the occasion of Falgun Shivratri in village Jharkhandi which is about eight miles from Janua P.-S. This *mela* is being held for the last 25 years. It lasts for three days and attracts a very big crowd. There is a Shivaji temple.

(9) *Kharagdiha Mela*.—This *mela* is held at Kharagdiha which is at a distance of 26 miles from Giridih on the Assam Access Road. It is held on the Paush Purnima Day every year to commemorate the death anniversary of a local saint known as Langta Baba. It lasts for one day only. This *mela* is being held for about the last 30 years. The offering of *chaddar* is done here by the Hindus and Muslims on alternate year.

Chatra Subdivision.

(10) *Kunda Mela in Partappur P.-S.*—This *mela* is held at the time of Falgun Shivratri and is marked by a big sale of cattle.

(11) *Kolhua Mela in Hunterganj P.-S.*—It is an ancient fair held twice in a year during Magh Basant Panchmi and Chait Ramnaumi respectively. There is a beautiful lake and ancient temple of Goddess Kali on the top of the hill. Its origin is not known. It is only a religious fair (*see also Kuluha Hill*).

(12) *Chatra Mela in Chatra P.-S.*—This *mela* is said to have started from 1882 and is principally a cattle fair held during the Durga Puja.

(13) *Kundri Mela in Chatra P.-S.*—The probable year of its origin is 1930 and is held on Kartik Purnima and is principally a cattle fair.

(14) *Kolhaiva Mela in Chatra P.-S.*—The probable year of origin is 1925. It is held on Magh Basant Panchmi and is principally a cattle fair.

(15) *Tutilawa Mela in Simaria P.-S.*—The probable year of origin is 1935 and is principally a cattle fair held on Falgun Purnima.

(16) *Lawalong Mela in Simaria P.-S.*—The probable year of its origin is 1880. It is held at the time of Aghan Purnima and is the biggest cattle fair of this subdivision.

(17) *Belgada mela, P.-S. Simaria.*—The probable year of its origin is 1920 and it is principally a cattle fair held on Baisakh Purnima.

(18) *Bhadli Mela in Itkhor P.-S.*—There is an ancient temple of Goddess Kali and Lord Shiva. The origin of this *mela* is not known. It is only a religious gathering on Makar Sankranti.

Padma.—It is two miles west of Barhi road, about 14 miles from Hazaribagh. It is the residence of the Raja of Ramgarh. It has a fine palace. It has a high school and a post office.

Parasnath.—South of the Himalayas the highest mountain for many hundred miles is Parasnath Hill. It is situated in Hazaribagh district, not far from the boundary of Manbhum and is 4,481 feet high, the effect of this elevation being accentuated by its comparative isolation and the beauty of its form. It rises immediately north of the Grand Trunk Road at about the 200th mile and has been easily accessible ever since the construction of that road in 1838. Formerly, however, the route from the north and west led from Patna and Nawada through Kharagdiha to Palganj whilst travellers from the south and east came by the road which led from Jaipur in Manbhum through Nawagarh to Palganj. As both these roads led through wild Ghatwal tracts, which were not reduced to any semblance of order before the arrival of the British about 1770 a pilgrimage to Parasnath must have been costly and dangerous. It is much to be regretted that there is no account of such a journey and it is significant that the oldest of the temples appears to date only from A. D. 1765. In 1780 the new military road to Benares was made and brought travellers within sight of Parasnath "from Bankura to Kathamsanri" and an interesting account of a visit paid in 1827 is reproduced in the "Statistical Account". In 1871 the railway to Giridih was opened and there was left a gap of nineteen miles only to be covered by road across the Barakar river to Madhuban at the northern base of the hill. Finally the Grand Chord Railway brought pilgrims to the very foot of the sacred mountain and in the season from December to March a motor service connects Isri station with the temples at Madhuban. Visitors can halt at Dumri Bungalow, a mile from Isri, where food and lodging are obtainable. They can make arrangements there for climbing the hill up its steep southern face; or they can proceed ten miles down the provincial road towards Giridih, whence another three miles of good road (branching off at mile 16) brings them to Madhuban and the hill can be climbed on its easier northern side. A good path suitable for a pony or a *dandy* leads to a dak bungalow on the summit, where there is ample accommodation and furniture, but not food, water or servants, for which visitors must make their own provisions. The nearest spring is at considerable distance from the town. The hill commands magnificent views and is comparatively cool; but the absence of any level ground at the top is a great drawback and it is difficult to obtain supplies cheaply.

Dr. Hooker, who ascended the hill in February, 1848, writes thus of the view of Parasnath from near Taldanga in Manbhum :—

"As the sun rose Parasnath appeared against the clear grey in the form of a beautiful broad cone, with a rugged peak of a deeper grey than the sky. It is a remarkably

handsome mountain, sufficiently lofty to be imposing, rising out of an elevated country, the slope of which upward to the base of the mountain, though imperceptible, is really considerable; and it is surrounded by lesser hills of just sufficient elevation to set it off. The atmosphere, too, of these regions, is peculiarly favourable for views; it is very dry at this season, but still the hills are clearly defined, without the harsh outline so characteristic of a moist air. The skies are bright, the sun powerful; and there is an almost imperceptible haze that seems to soften the landscape, and keeps every object in true perspective. "

The view from the hill itself he describes as follows :—

" The view from the saddle of the crest was beautiful, but the atmosphere too hazy. To the north were ranges of low wooded hills, and the course of the Barakar and Ajay rivers, to the south lay a flatter country with lower ranges, and the Damodar river, its all but waterless bed snowy white from the exposed granite blocks with which its course is strewn. East and west the several sharp ridges of the mountain itself are seen; the western considerably the highest. Immediately below, the mountain flanks appear clothed with impenetrable forest, here and there interrupted by rocky eminences, while to the south the Grand Trunk Road shoots across the plains, like a white thread as straight as an arrow, spanning here and there the beds of the mountain torrents. "

Portions of the hill have been variously used since the British occupation of the district as a sanatorium for British troops but the confined space and absence of water made it unsuitable for such use. According to the version of the Jains when construction of sanatorium started they lodged an emphatic protest with the Government of India on the ground that the sacredness of the hill was likely to be violated which would offend the sentiments of the Jains. Accordingly the idea of establishment of a sanatorium was abandoned not merely because of confined space and absence of water but in respect of the sentiments of Jain, and the building which was constructed was later utilised as Dak Bungalow.

Parasnath is the " Marang Buru " or hill deity of the Santals of Hazaribagh, Manbhum, Bankura and Santal Parganas and each year they assemble at the period of the full moon in Baisakh from those

districts and celebrate a religious hunt for three days; after which a great tribal session is held for the trial of charges against *manjhis* and *parganais* and of other grave matters which effect the outcasting of individuals. The entry of this custom in the record-of-rights which was prepared in 1911 and of the similar right of the Ghatwars was followed by the institution of a suit by the Svetamber Jains to have it declared that no such custom exists. That suit was dismissed by the Judicial Commissioner and an appeal, preferred against his order, has been rejected by the High Court. The case went up to the Privy Council and it was held that the Santals have the customary right of hunting on the Parasnath Hill.

The special sanctity of Parasnath for the Jains arises from the tradition that the twenty-third of the Tirthankaras (the religious saints who are the objects of their worship), Parsva or Parsvanath, like nine of his predecessors, attained *nirvana* on the hill. According to the local tradition the number of Tirthankaras who attained *nirvana* on the Parasnath Hill is 20 and not 9. For each of them there is a shrine (*gumti for tuk*) on the hill. It is said that he was born at Benares and died at the age of one hundred years when fasting, along with thirty companions. He is usually depicted with a blue complexion and his cognizance is a hooded snake.

The foundation of Jainism is wrongly attributed by European scholars to the 24th and last Tirthankara, Vardhaman Mahavir, a contemporary of Buddha in the reign of King Bimbisara (about 519 B. C.), whose kingdom of Magadha then coincided with the limits of the modern districts of Patna and Gaya. Jainism was in existence from before and the 24th Tirthankara Mahavir gave a great fillip to its spread. Mahavir was related to the royal family, and spent many years of his ministry in that kingdom, where he gathered a large following of monks who afterwards spread his teaching over the greater part of India. At the present time the majority of the Jains belong to western India; and a large proportion of the Marwari traders who are to be found in every centre of trade belong to one or other of the Jain sects.

The two most prominent of these sects are the Svetambaras and Digambaras. The word Digambara means 'sky-clad', an euphemism for nude; and apparently their habit of taking their food naked, and refusing to decorate the image in their temples with any kind of ornament, are survivals of a wider practice, to which they owe their name. The Svetambaras or 'white-clad' on the other hand take their meals clothed and adorn the images of the Tirthankaras with a profusion of golden ornaments. They admit that women can obtain

nirvana and they hold that an ascetic should use a face cloth to guard the mouth and a brush for sweeping away insects, differing in all these matters from the Digambaras. At present they control the ceremonial at the temples and shrines on the hill and once the pilgrim has crossed the boundary just above Madhuban he must place himself in their hands, even though he be a Digambara. This has excited great bitterness between the sects, each of which is making strenuous attempts to obtain a more assured position on the hill. So far, the Svetambaras have had the greater success, for they have for some years enjoyed a lease by which they are entitled to build their shrines wherever they choose on the hill; but unfortunately for them the High Court declared the lease to be void. The matter was litigated again in Hazaribagh Courts and in the Patna High Court and ultimately a compromise has been arrived at. Now both the sects have freedom to worship at the temple without any hitch.

The old District Gazetteer of Hazaribagh states that "The hill is included in the old geographical division of Kharagdiha, and is shown in the map prepared by Rennell in 1779 as lying entirely within Palganj *gadi*. Recently, however, the owner of the Nawagarh *gadi* in Manbhum obtained a decree in a Civil Court that he was entitled to the southern face of the hill and the question is now on appeal before the High Court. A further complication in the present tangle has arisen out of a proposal made a few years ago to build houses for Europeans on the hill. The Jains disliked this and offered to buy the hill from the Encumbered Estates Department, which was at the time in charge of the estate of the Tikait of Palganj and the Digambaras claim that in the subsequent negotiations they were given a definite and enforceable promise of sale and this claim they are prosecuting by a civil suit. To add completeness to this maze of litigation which is financed by the subscriptions of the faithful throughout India the two sects have a suit pending between themselves regarding the manner of worship to be observed at the shrines on the hill".

The above may have been true at the time the District Gazetteer was last written. The hill was bought by the Jains from the Wards and Encumbered Estates, and the dispute with their owner of Nawagarh *gadi* in Manbhum was settled amicably long ago. There is at present no complication about any proposal to build houses for Europeans on the hills. Subsequently to the purchase of the hill by the Jains from the Wards and Encumbered Estates there arose differences between the trustees of the Digambaras and Svetambaras temples of the Jain as to be observed at the shrines on the hill. The dispute was decided in title suit by the High Court in favour of Svetambaras and

their trustees are in charge of the management of the hill. Recently under the Land Reforms Act the management of the hill was notified to be taken over by Government. The members of the Jain Community pressed their case for release of the hill from Government management on the ground that this would hurt the religious susceptibility of the Jains.

It has been stated above that the oldest date borne by any building is A. D. 1765, and it is believed that none of the edifices whether on or below the hill are of much earlier age. The pediment and a body of the temple were ornamented with arched entrances. The officers of the Archæological Department who have examined them have found nothing of special interest. The main building on the hill is a temple on the south-east side of the summit which was described in 1827 as follows :—

“ About three quarters of a mile on the southern descent from first *math* at which I arrived, and snugly sheltered from the northern and western storms, stands the principal and the most beautiful of all the temples in this neighbourhood. The same observation that I have made regarding the mixture of Musalman and Hindu architecture in the temples of Madhuban will apply to this *mandir*, which as I descended through the thick jungle upon it, looked more like a Muhammadan *dargah* than a building belonging to the original people of Hindustan. Government have deferred the actual taking over of the charge of the management of the hill and the representation of the Jaina is still under consideration. The pediment and body of the temple were ornamented with arched entrances between single pillars, such as are common in the larger houses of the Hindus; but above this all was in Muhammadan fashion. Five handsome fluted domes, one large one in the centre, surrounded with four small ones each forming the roof of a corresponding apartment, seemed too heavy a crown for the edifice from which they rose. These domes were well ornamented and were pointed with those spires composed of golden or brazen balls and ending in arrow heads, which are generally to be seen shooting out from the tops of minarets. The four sides of the building are alike, but to mark the principal approach, a large *chabutra* lies in front of the eastern archways.

On entering the centre and holy chamber of this temple it is impossible to avoid being impressed with the simple beauty of the place. The pavement is composed of fine slabs of blue veined marble and on a white marble pediment opposite to the entrance five very beautiful idols of the Jain Tirthankaras sit in dignity waiting for the prayers of their disciples, which are rendered more deep toned by the echoing influences of the domes that form the ceiling of the sanctuary. The centre figure, which represents Parasnath as a naked figure sitting cross-legged in an attitude of abstract meditation, is cut out of a beautiful piece of black marble. It measures between three and four feet high, as sitting and is remarkable graceful idol, in full preservation. The other four are each about two feet and a half high, all of them of white marble and one of them wearing the same hood which adorns the head of the central image, as the peculiar ornament of Parsvanath. On the pedestal of each idol the same inscription appears that Shuogal Chand Jagat Seth erected it in A. D. 1765. The chamber which constitutes this sanctuary is about twenty feet square and between thirty and forty feet high to the centre of the dome. There are no ornaments beyond those I have described, but the marble pavement, pedestal and idols are the handsomer for being unadorned. Of the four smaller apartments at the corner two remain empty and the other two contain each seventeen idols of all sizes (but all of the Jain form and posture) ranged along a ledge in the wall. These appear to have been left at will by pilgrims who may have been anxious to consecrate their household gods at the shrine of Parasnath ”.

“ It is held to be necessary that every *gumti* or *tuk* should be visited and receive an offering at the hands of each pilgrim and as many of the peaks are several *kos* distant from the *math* of Kuntnath to which the ascending path arrives, and as some of them can only be mounted by climbing, this is indeed a penance of extreme labour and fatigue. The length and tediousness of this duty is increased by their strict forbearance from committing any kind of impurity whatever within the holy precincts and as it is their custom to eat by day light only to

avoid incurring the destruction of the smallest insect. Several excursions to the summit are necessary for the accomplishment of the pilgrimage. Each *gumti* is a solid pile of brickwork, varying in height and size according to the facility its station afforded to the builders. The largest does not exceed eight feet in height and the same in length and breadth, while some appeared not to be larger than one-fourth of these dimensions. In each of the buildings is a small recess, on the flat of which is marked the print of a foot revered as the *charan* or last foot mark upon earth of the Tirthankara whose name is engraved beneath The visits and salutations to several *charans* on the peaks are concluded by a more deliberate adoration at the temple of Parsvanath. After concluding the duties on the mountain, those who desire to leave no claim to a sanctified character unadvanced perform a circuit round the base, starting from Madhuban, to which they again return traversing a circle of at least thirty miles. From this place the greater part of the pilgrims depart for the other temples at Pawapuri in Bihar and Champapuri near Bhagalpur." (Quoted in Lister's Hazaribagh Gazetteer.)

The highest peak of Parasnath is covered by a lofty pointed temple, which has replaced shrines, of which at least two had been successively destroyed by lightning. This temple is a conspicuous land-mark for many miles. There are two routes to Parasnath: (1) from Nimighat to top of Parasnath. One mile is motorable *pucca* road and 5 miles are a regular climb to the main temple; (2) from Madhuban $5\frac{1}{2}$ miles. After $2\frac{1}{2}$ miles there is a historic perennial stream which is called "Gandharva Nala". Further up there is another stream called "Sita Nala". The section of the hill from Madhuban to Gandharva Nala is not regarded as very sacred by the Jains. It is only the portion from Gandharva Nala up to the summit which is very sacred to Jains. On the way between Madhuban and Gandharva Nala "Phooly Bagan" is situated which is a settled estate in which tea used to be grown. The cultivation of tea has since been abandoned but the gardens are now being used as fruit orchard.

The administrative headquarters of the two sects are at Madhuban on the north side of the hill near the beginning of actual ascent. It is connected by a good road about three miles long, with one unbridged stream, with the provincial road which runs from Giridih to Dumri on

the Grand Trunk Road. The temple and rest houses of the two sects are congregated in the closest proximity and though none of the buildings appear to be of any antiquity, yet the collection of white-washed edifices, gay with flags and the golden ball of their cupolas, rising out of a green bed of their foliage is very beautiful when seen from the various stages of the ascent.

Peterbar.—It is at a distance of 12 miles from Gola. It has a fertile soil. Here rice is produced in abundance and it is a place for Government purchase during scarcity.

Rajrappa.—It is 9 miles from Gola. It has a temple of the goddess 'Chhinnamasta' at the confluence of the Damodar and the Bhera, a tributary to it. Persons from distant places come to this place to worship the goddess. Amidst hills and dense forests the river Damodar narrows down into a gorge and presents a beautiful sight. A big fair is held every year on vernal equinox (Paus Sankranti).

Raj Derwah.—Raj Derwah is a beauty spot. It is the centre of a National Park, a portion of reserved forest on the Hazaribagh-Barhi Road near Surajpura. The forest bungalow is about six miles from Hazaribagh-Barhi Road near about its 14th mile. Shooting is strictly prohibited here. The bungalow has two rooms with good accommodation but no arrangement for cooking food. There is no electricity. There is a water tower which commands an excellent view. This is an ideal picnic spot and visitors are advised to take their own provisions and lanterns.

Shilwar Hill.—Shilwar Hill is a beauty spot five miles from Hazaribagh town on the road to Bagodar. A number of old images have been found at this place. In 1953 a temple was constructed where the idols of Jagannath, Balbhadr and Subhadra have been installed and a *mela* has been started on Ratha Yatra day. The place is now named 'Jagannath Dham'. It is an ideal picnic spot although very close to the town.

Sitagarha.—It is at a distance of four miles east of the Hazaribagh town. It has got a good agricultural farm established and organised by a Christian Mission. At Sitagarha there is an agricultural school run by the Roman Catholic Mission and a Roman Catholic hospital known as Holy Family Hospital. There is also a branch of Calcutta Pinjrapole at Sitagarha where the *Gopastami Mela* is held on the 8th day of the bright-night of Kartik at every year. The arrangements are made by the local Marwaris, both Jains and Agarwals.

Suraj Kund.—Suraj Kund is the name of a group of four hot springs on the Grand Trunk Road within a few miles of Barhi. These springs were examined by Dr. Hooker (*Himalayan Journals*, Vol. I, Chap. II) in 1848. The water of the springs has therapeutic effect due to the excess of sulphuric chemical contents. The normal temperature of the water is 169° to 190°F. Between two of them a cold spring arises two paces away. A big fair is held each year on the vernal equinoctial day (*Makar Sankranti*).

Tamasin.—It is 16 miles north-east of Chatra town, accessible by a *katcha* fair-weather road *via* village Kolnaia in Chatra P.-S. There is a big reservoir of water at its foot. It is famous for the image of goddess Bhagwati. This is also a beauty spot.

Tilaiya.—Built on the river Barakar, about 130 miles above its meeting with the Damodar, Tilaiya is the first multi-purpose dam of the Damodar Valley Corporation to be constructed. Kodarma on the Grand Chord Line of the Eastern Railway is the nearest railway station nearly 14 miles from the dam site while the public bus plying on the Patna-Ranchi national highway through Urma; about three miles off.

The construction of this all-concrete dam started in January, 1950, and was completed by December, 1952. Of the two 2,000 KW. hydro-electric generators installed departmentally the first was switched on by the Prime Minister of India on the 21st of February, 1953. The second set has been in operation from the 10th July, 1953. While the resultant release of water throughout the year will be harnessed at Durgapur for permanent irrigation, the dam is contributing to the moderation of floods in the Lower Valley.

The dam was designed and constructed departmentally. Manufactured in Japan, the hydro-electric power plant, consisting of two 2,800 BHP, 250 RPN, vertical shaft Francis turbines directly coupled to 2,500 KVA. 11 KV. alternators, is capable of a continuous output of 2,000 KW. The hydro-electric station and the 11/53 KV. step up outdoor sub-station were also designed and constructed departmentally. Since the opening of its first unit, the plant has been supplying commercial power to Hazaribagh town, Kodarma town and mica mines and the adjoining villages. More and more mica fields and towns in the neighbourhood are also being given power from the same source.

The new reservoir having submerged a portion of the old Kodarma-Singrawan road, seven miles of a new one, together with a 550 feet bridge was constructed by the Damodar Valley Corporation in about

six months time as a link of the Patna-Ranchi national highway. Those displaced by the reservoir were given the option to choose between cash compensation and land for land and house for house. Four new villages have been built in the locality to house the affected population and over 4,200 acres of badly eroded waste land have been reclaimed for their agricultural needs.

STATISTICAL DATA.

River Basin—

Catchment Area—380 square miles.

Inflow :

Maximum—48,439 cusecs.

Average—560 cusecs.

Annual Rainfall—

Maximum—75 inches.

Minimum—35 inches.

Average—50 inches.

Dam—

Height :

Above River-bed (E. I. above mean sea level 1136.00) to Roadway level—98 ft.

Length :

Spillway—510 ft.

Abutments—407 ft.

Right—230 ft.

Left—

Total—1,147 ft.

Width :

Maximum at Base-Spillway Section only—96 ft.

Including Bucket—126 ft.

Power Plant—

Present—4,000 KW.

Future—6,000 KW.

Head :

Maximum—86 ft.

Minimum—54 ft.

Hydro-electric Generation—22,770,000 KW. per annum.



Waterfalls.—There are several waterfalls in Chatra subdivision and every one of them could be described as a beauty spot. Some of them have been noticed before.

The “ Bokaro Falls ” on Hazaribagh-Ranchi road near village Morangi about 8 miles from Hazaribagh town and the Tiger Falls on the Hazaribagh-Barhi road near Surajpura about 16 miles from Hazaribagh town deserve special mention. Rajrappa in the Gola P.-S. has a waterfall. There is also a waterfall in Usari within Giridih P.-S.

Dumer Sumer.—It is 8 miles north of Chatra and is accessible by a *katcha* motorable road for seven miles and ten on foot. There is a precipitous fall of water from a great height in the reservoir. On all sides there are hills.

Gogri.—It is a waterfall and a steep descent leads to its foot. It is four miles west of Chatra town on the way to Maloodah.



ANNEXURE TO DIRECTORY.

SARKARI HATA.

EXTRACT FROM THE FINAL SETTLEMENT REPORT REGARDING THE SARKARI HATA ESTATE, DISTRICT HAZARIBAGH BY MR. F. A. SLACKE.

History of the estate including a brief account of any former settlements in the shape of a tabular statement together with a more detailed account of the last settlement and the reasons why the present settlement is made.

In 1790 A. D. by a Pattah, dated the 25th of March the then Zamindar of Ramghar granted to Government at the town of Hazaribagh for cantonment purposes an area of land amounting to 465 bighas 7 kathas Government undertaking to make an abatement in the revenue due from the Zamindar of Rs. 370-14-5.

In 1819 A. D. for the same purpose Government acquired from the Zamindar of Ramghar a further tract of land at Hazaribagh amounting to 188 bighas 7 kathas 13 dhurs Government agreeing to pay the Zamindar as rental for this land, the yearly sum of Rs. 202-12-10 pies.

Again in 1838 A. D. for the same purpose Government acquired from the Zamindar of Ramghar a further tract of land about 496 bighas 1 katha 12 dhurs and agreed to pay the Zamindar for this area a yearly rental of Rs. 878-13-4 pies.

Thus in all up to 1839 A. D. Government acquired for cantonment purposes at Hazaribagh from the Zamindar of Ramghar an area of land amounting to 1,149 bighas 16 kathas 5 dhurs (local) for which Government paid the Zamindar yearly Rs. 1,452-8-7 pies, namely :—

			Rs.	a.	p.
Abatement of revenue	...	...	370	14	5
Yearly cash rental	...	...	1,082	3	10
Total	...	...	1,453	2	3

Either about 1841-42 or in the beginning of the next year Hazaribagh was abandoned as a military cantonment and in January, 1948 Government ordered that the lands previously acquired from the Ramghar Zamindar except the area then occupied by public buildings should be given back to the Zamindar on condition that the lands should if needed be returned to Government on the same terms as before.

With the final report regarding the carrying out of the above order two lists were submitted showing 438 bighas 8 kathas 14 dhurs as occupied by public buildings and 91 bighas 12 kathas 8 dhurs by private buildings all 575 bighas 1 katha 2 dhurs.

Government sanctioned the retention of the whole of this area (which became the civil station) on an annual payment for the same to the Zamindar of Rs. 335-14-7 pies, that is—

	Rs.	a.	p.
Rent of 575 bighas 1 katha 2 dhurs	...	706	13 0
Deduct abatement of revenue made in			
1790 A. D.	...	370	14 5
Balance	...	335	14 7

The remainder of the land was restored to the Zamindar.

In 1858-59 it was considered fit to place troops again at Hazaribagh.

Accordingly the lands relinquished in 1848 were retaken and the total area then held by Government under the Ramghar Zamindar appears to have been 1,400.

For this Government agreed to pay a yearly rental to the Zamindar of Rs. 1,357-1-7 pies, exclusive of the revenue (Rs. 370-14-5 pies abated in 1790 A. D.).

In 1865 the Zamindar of Ramghar granted Government a perpetual lease of the whole of these lands at a yearly rental of Rs. 1,357-1-7 pies, exclusive of the revenue abatement made in 1790 A. D.

In the same year (1865) for the purpose of improving the sanitary condition of the cantonment a tract of land amounting to 4,462 bighas situated around Hazaribagh was acquired from the Ramghar Zamindar by Government. The Zamindar in that year gave Government a perpetual lease for these lands on condition of his receiving yearly for them the sum of Rs. 2,600. These lands amounting in all by the old records to 5,862 bighas form the estate now known as the Sarkari Hata.

Up to 1871 A. D. Government yearly paid the Ramghar Zamindar the sum of Rs. 3,957-1-7 pies (Rs. 1,357-1-7 pies plus Rs. 2,600) but in that year an order was passed directing that in future payment should be made by an abatement of the revenue due from the Zamindar to a similar extent.

Thus Government actually now pays the Ramghar Zamindar for the Sarkari Hata Estate in the shape of an abatement of revenue the yearly sum of Rs. 4,328, that is—

	Rs.	a.	p.
Abatement of revenue made in 1790 A. D.	370	14	5
Rent of land acquired in 1858-59	...	1,357	1 7
Rent of land acquired in 1865	...	2,600	0 0
Total	...	4,328	0 0

From the 15th of May, 1884 Hazaribagh ceased to be a military station and the lands and buildings were then all handed over by the Military to the Civil Department.

At the time the perpetual leases were granted Government paid the Ramghar Zamindar a lump sum of money on condition of his compensating the various under-tenure-holders who were found to be occupying the greater part of the lands taken up by Government. This was done and so it is said that now there are no under-tenure-holders in the estate. But on enquiry I found that there were now in the Sarkari Hata Estate excluding the Convent and the Roman Catholic Church (rent-free sites for which were given by Government) the following rent-free tenures :—

In cantonments—

	B.	K.	Dh.
Mrs. Burmell's bungalow and compound	5	13	16
Mr. J. Campbell's bungalow and compound	12	2	0
			(local)
Miss Von Fugger's bungalow and compound	1	16	17
			(local)

In Chepar—

Mr. Macintyre's bungalow and compound ...	10	16	13
Mirza Imbad Ali's holding (occupied by huts).	1	8	11

In Matwaree—

Mr. R. R. Silveren's bungalow and compound	13	19	19
			(local)

In Nowada—

	B. K. Dh.
Baboo Jadu Nath Mukherjee Rai Bahadur's bungalow and compound.	12 18 9 (local)
Beni Bhagat's holding (a tank and an orchard).	8 12 12
Mirza Imbad Ali's holding occupied by huts	10 19 1
The Ramghar Zamindar's bungalow compound	6 14 1 (local)

In Surley—

Mrs. Smart's bungalow and compound ...	7 13 0 (local)
--	-------------------

In 1885 A. D. when the other bungalow compounds were first assessed the abovementioned ones were left out.

From the time Government acquired these tracts the portions set apart for cultivation were let out to tikkadars on short leases.

But in 1875 a ryotiwari settlement for ten years was made of 21 of the villages and tracts forming part of this estate and a 9 years' settlement of portion of land in mouza Cerea. This settlement was to take effect from the 1st of April, 1875 with regard to the 21 villages and tracts and from the 1st of April, 1876 with regard to the portion of land in mouza Cerea, vide Board's letter no. 217, dated the 28th of August, 1877.

In this settlement the following portions of land were not included as they were then not open to settlement :—

- (a) the area known as the Cantonment.
- (b) the plot of land at Burhee.
- (c) 11 bighas in Nuru Mouza.
- (d) 6 bighas 17 kathas in mouza Chepar.

Subsequently to 1875 and before the close of the ryotiwari settlement abovenoted these four tracts all came under settlement but it does not appear that any regular settlement was made of them.

In 1875 the Settlement Officer assessed the land according to quality and area highland separately from low lands but as was pointed out in my letter no. 189, dated the 4th of June, 1887 the rates fixed followed no rule and so could not be used as guides in the present settlement. The following gives in tabular form the results of the settlement of 1875 :—

	B. K. Dh.
Extent in Bighas	... 6,228 11 16
Forest jungle and waste	... 355 19 19.12

			B. K. Dh.		
Sites of village roads, tanks and lands other- wise incapable of cultivation.			769	10	16.10
Rent-free (the Convent)	...	...	24	0	0
Cultivated and fallow	...	...	5,079	0	0
			Rs. a. p.		
Former rental	...	...	2,608	0	8
Settlement rental	...	...	4,414	12	7
Increase therefore	...	...	1,818	3	6

After Government acquired the estate certain portions of land were given to various persons on perpetual lease by the then Deputy Commissioner whose acts were subsequently confirmed by the higher authorities (vide statement no. 1). The tracts so given comprise an area known as Boddamganj (not included in the present settlement but liable to a yearly rental of Rs. 135-9 annas) and the following bungalow compounds :—

			B. K. Dh.		
<i>In Chepar—</i>					
Major Rouses	8	6 13
<i>In Surley—</i>					
Baboo Moti Mitters	1	19 10
<i>In Khargaon—</i>					
Akhoy Baboos	6	1 1
Mosamat Jagatarini Devyas	6	13 19
Mr. Mers	3	17 3

and also two holdings in the town Bara Bazar. The present settlement was undertaken owing to the expiry of the last. The work was given to me in December, 1885, and measurement work was begun on the Estate in May, 1886.

APPENDIX.



सत्यमेव जयते



सत्यमेव जयते

TABLE I.
Decennial average of Annual Rainfall in inches (District Hazaribagh).

Rain registering stations in the district of Hazaribagh.	1901—1910.	1911—1920.	1921—1930.	1931—1940.	1941—1950.	Normal rainfall.
1	2	3	4	5	6	7
Pachumba ..	47.35	53.55(f)	50.71	47.61(f)	54.82	50.22
Hazaribagh ..	49.82	56.24	50.36	51.29	51.91(e)	53.04
Tandiwa ..	..	48.99(c)	53.63	45.11(c)	46.67(c)	49.09
Barhi ..	46.55	54.55(f)	51.12	49.57	56.91	49.65
Chatra ..	48.09	52.71 *	56.59	50.76	56.02	51.91
Karagdeha ..	42.99(c)	46.05(c)	..	..	..	49.38
Rangarh ..	45.02(f)	56.44(d)	53.10	48.46	54.17(a)	51.01
Kodarma ..	49.35(c)	49.91	46.81	48.48	48.11	48.57
Dhanwar ..	..	54.28(c)	46.22	52.24	44.74(c)	48.87
Begodar ..	49.89(c)	47.42(d)	51.68	42.71	46.29(f)	48.50
Hunterganj ..	..	53.07(b)	49.51	52.27	57.18	50.47
Gola ..	..	60.62(f)	54.35	52.13	58.71	55.45
Satgawan ..	..	45.70(b)	40.91	43.90(f)	35.21(d)	42.91
Jamua ..	..	..	51.91(e)	33.76	33.48(b)	43.07
Dumri ..	..	..	..	49.14(d)	50.95(d)	50.97
Barakatha ..	..	..	51.08(f)	45.80(x)	..	49.71

(x)—Data for 3 years.

(a)—Data for 4 years.

(b)—Data for 5 years.

(c)—Data for 6 years.

(d)—Data for 7 years.

(e)—Data for 8 years.

(f)—Data for 9 years.

TABLE II.

Area and Population (District Hazaribagh).

District and Subdivisions.	Area in sq. miles.	Number of Towns.	Villages.			Population in 1951.						Number of houses occupied.
			Urban.	Rural.	Total.	Male.	Female.	8	9	10		
I	2	3	4	5	6	7	8	9	10			
Hazaribagh	..	8	6,129	133,126	1,804,084	1,937,210	981,264	955,946	324,012			
Subdivision.												
Sadar	..	..	..	..	..	974,494	494,791	479,703	..		
Chatra ..	..	..	..	..	..	262,514	127,837	134,677	..		
Giridih ..	..	..	..	..	..	700,202	358,636	341,566	..		
Population at the previous Censuses.												
District and Subdivisions.		Number of persons per sq. mile.	Population at the previous Censuses.								1931.	1941.
			1881.	1891.	1901.	1911.	1921.	1931.	1941.			
I		11	12	13	14	15	16	17	18			
Hazaribagh	..	277	1,104,742	1,164,321	1,177,961	1,288,609	1,276,946	1,517,357	1,751,339			
Subdivision.												
Sadar	..	286	746,040	762,510	760,164	835,953	590,487	720,196	839,551			
Chatra ..	..	170	..	..	..	..	218,567	238,874	263,241		
Giridih ..	..	342	358,702	401,811	417,797	452,656	467,892	558,287	648,447		

* In the chapters the area has been shown as 7,016 sq. miles, which represents the Surveyor-General's district area total as calculated from the map, whereas the area figures shown in this table are based on the records of the State Survey Department. Where necessary, they have been rounded off to the nearest integer.

TABLE III.
Population of Towns (District Hazaribagh).

[illegible]

TABLE III—*contd.*
Population of Towns (District Hazaribagh)—*contd.*

Towns in the district of Hazaribagh.	Males.										Females.		
	1872.	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.	1961.	1872.	1881.	1891.
I	11	12	13	14	15	16	17	18	19	20	21	22	23
Hazaribagh	6,312	7,639	8,328	7,826	8,564	8,561	10,903	13,289	18,063	4,738	7,637		
Giridih	..	..	..	5,016	5,713	9,885	11,122	13,593	16,360	..	..	..	..
Kargali	..	..	..	..	..	..	..	5,948	9,538	..	..	..	..
Rangarh	..	..	..	..	..	..	..	..	9,449	..	..	..	..
Chatra	4,287	5,613	4,957	5,080	4,686	4,092	4,312	4,899	5,028	4,531	6,287		
Bokaro	..	..	..	..	..	..	..	4,165	5,497	..	..	..	..
Jhumri Telaiya	..	..	..	..	..	..	..	..	5,097	..	..	..	..
Bermo	..	..	..	..	..	..	..	3,002	4,787	..	..	..	..

TABLE III—*concl.*
Population of Towns (District Hazaribagh)—*concl.*

Towns in the district of Hazaribagh.		Females.							
		1891.	1901.	1911.	1921.	1931.	1941.	1951.	
1		22	23	24	25	26	27	28	
Hazaribagh	..	8,344	7,973	8,445	8,499	10,074	11,629	15,749	
Giridih	..	..	4,417	4,955	8,989	10,000	11,733	12,807
Kargali	..	..	..	..	..	..	4,179	8,106
Rangarh	..	..	..	..	..	..	..	5,326
Chatra ..	..	5,826	5,619	4,536	4,133	4,446	4,739	4,883
Bokaro ..	..	..	..	..	..	..	3,344	4,310
Jhumri Telaiya	..	..	..	..	..	..	..	3,993
Bermo ..	..	..	..	..	..	..	2,672	4,133

TABLE IV.
Religion (District Hazaribagh).

Year.	Population.				Hindus.		Sikhs.		Jains.		Buddhists.	
	Persons.		Male.		Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.
1	2	3	4	5	6	7	8	9	10	11	12	
1931	1,517,357	751,956	597,528	610,571	129	92	464	330	135	86	
1941	1,751,339	879,543	871,796	531,956	607	306	507	392	54	42	
1951	1,937,210	981,264	955,946	866,155	2,474	1,702	956	733	169	58	

Year.	Zoroastrians (Parses).		Muslims.		Christians.		Jews.		Tribals.		Non-Tribals.		Others.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1931 ..	1	..	..	84,799	86,895	1,706	1,463	..	..	67,192	65,964	..	..	2
1941 ..	6	4	105,787	103,597	1,412	756	1	1	239,213	239,040	..	..	..	..
1951 ..	..	..	106,803	108,158	3,603	3,325	..	..	1,083*	545*	21*	22*	..	..

*These figures under "other religious" have been taken from the Census Tables, 1951. The figures are not clear.

TABLE V(a).
Agricultural Statistics Area (in acres) (District Hazaribagh).

Year.	Winter rice.	Autumn rice.	Wheat.	Barley.	Maize.	Gram.	Linseed.	Til.	Rape and mustard.	Sugar- cane.	Jute.	Arhar.	To- bacco.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1943-44	146,000	362,200	5,500	11,000	90,000	11,000	17,000	6,700	54,000	9,600	..	..	300
1944-45	146,000	345,000	5,500	11,000	86,500	11,000	17,000	6,600	50,000	9,600	..	200	300
1945-46	146,000	345,000	5,500	11,000	90,000	11,000	17,000	6,600	54,000	9,600	..	200	300
1946-47	146,000	345,000	5,500	11,000	90,000	11,000	17,000	6,600	54,000	9,600	..	200	300
1947-48	146,000	345,000	5,500	11,000	90,000	11,000	17,000	6,700	54,000	9,600	..	200	300
1948-49	146,000	345,000	5,500	11,000	80,000	11,000	17,000	6,700	54,000	9,600	..	200	300
1949-50	654,913	23,153	18,927	13,825	100,896	18,413	4,875	1,755	42,707	9,065	..	20,887	475
1950-51	684,185	30,053	12,530	7,717	94,168	9,825	1,977	2,408	34,822	9,987	..	15,106	564
1951-52	642,537	28,576	11,314	6,672	95,340	11,298	2,642	4,044	34,045	6,812	..	16,519	466
1952-53	632,388	22,505	7,766	5,477	98,736	8,676	1,977	3,195	33,967	6,855	..	19,101	408
1953-54	780,522	19,132	7,819	5,897	90,587	7,739	1,479	4,699	27,437	5,815	..	13,651	337

TABLE V(b).
Agricultural Statistics—Produce (in tons) (District Hazaribagh).

Year.	Winter rice.	Autumn rice.	Wheat.	Barley.	Maize.	Gram.	Linseed.	Til.	Rape and mustard.	Sugar- cane raw (Gur).	Jute.	Arhar.	To- bacco.
I	2	3	4	5	6	7	8	9	10	11	12	13	14
1943-44	53,096	81,961	945	2,997	22,812	2,346	2,585	962	10,692	12,365	..	..	96
1944-45	47,733	78,069	945	3,345	21,672	3,345	2,389	948	10,929	11,424	..	..	92
1945-46	49,342	78,069	511	1,998	20,498	1,998	2,585	948	12,775	12,365	..	..	57
1946-47	53,633	78,069	511	2,693	20,498	2,997	2,585	962	12,775	12,364	..	..	57
1947-48	48,806	93,277	511	3,345	30,416	3,692	2,585	962	12,775	12,365	..	..	57
1948-49	41,297	86,180	511	3,345	15,869	3,692	2,585	962	12,775	12,365	..	..	57
1949-50	253,572	4,525	4,088	2,748	28,687	3,193	2,386	237	2,276	1,814	..	..	107
1950-51	140,443	5,255	2,177	1,176	18,922	1,274	171	223	3,620	668	..	..	74
1951-52	142,866	3,034	1,903	972	28,647	1,651	225	466	4,015	416	..	..	180
1952-53	198,577	2,608	1,244	1,080	29,524	1,020	169	284	4,055	414	..	..	205
1953-54	332,649	3,238	1,583	758	12,846	992	272	471	6,551	812	..	3,626	62

TABLE VI.

Statistics of Crime (District [Hazaribagh]).

Year.	Murder.	Dacoity.	Robbery.	Burglary.	Theft.	Riot.	Swindling.
1	2	3	4	5	6	7	8
1933 ..	18	16	7	502	383	21	} Figures not avail- able.
1934 ..	15	5	7	365	336	18	
1935 ..	14	15	6	454	429	39	
1936 ..	14	20	18	525	467	28	
1937 ..	23	10	23	442	478	25	9
1938 ..	18	18	18	559	520	13	17
1939 ..	23	26	16	752	404	26	38
1940 ..	26	20	13	682	463	39	16
1941 ..	21	34	15	1,062	404	44	15
1942 ..	25	55	27	1,371	463	41	23
1943 ..	34	86	15	1,635	591	40	8
1944 ..	25	43	24	951	773	51	10
1945 ..	20	23	21	845	758	29	15
1946 ..	30	33	28	1,004	924	29	16
1947 ..	28	40	20	1,038	820	65	10
1948 ..	30	51	24	960	880	74	8
1949 ..	41	66	26	1,025	914	80	20
1950 ..	49	37	47	886	888	92	21
1951 ..	50	68	39	1,032	910	94	14
1952 ..	54	108	61	1,049	955	88	19
1953 ..	37	56	39	925	803	88	12
1954 ..	51	66	37	853	727	81	6

TABLE VII.
Criminal Justice (District Hazaribagh).

Period.	Number of cases.			Number of persons.		Number of witnesses examined.	
	Reported.	Accepted as true.	Brought on trial.	Acquitted or discharged.	Convicted.	At Sessions Court.	At Magistrates Court.
I	2	3	4	5	6	7	8
Annual figures for—							
1951 ..	..	11,392	10,105	7,527	8,829	6,637	587
1952 ..	..	9,762	8,223	6,094	8,920	6,902	532
1953 ..	..	11,269	10,073	7,531	10,090	9,200	557
							18,328
							15,614
							16,466

TABLE VIII.
Civil Justice (District—Hazaribagh).

Period.	Total number of Suits instituted.	Total value of suits.	Number of insolvent petitions presented by debtors:—			Insolvent petitions presented by Creditors.	Number ad-judged to be insolvent.
			Under arrest or imprisonment.	Not under arrest or imprisonment.			
1	2	3	4	5	6	7	
Annual figures for—							
		Rs.					
1949 ..	1,222	15,39,390	1	..	..	..
1950 ..	1,431	39,12,362	..	..	..	1	
1951 ..	1,111	31,41,530	1	3	..	2	
1952 ..	991	14,10,915	1	6	6	4	
1953 ..	1,096	18,39,471	2	4	..	4	

TABLE IX.

Consumption of Principal Intoxicants (District—Hazaribagh).

Year.		Country spirit.	Ganja.	Bhang.	Opium.
1		2	3	4	5
		L. P. Gallons.	Mds. Srs. Chs.	Mds. Srs. Chs.	Mds. Srs. Chs.
1900-01	.. ..	6,440	30 10 4	15 5 7	9 2 0
1901-02	.. ..	8,192	27 38 13	16 12 3	9 32 0
1902-03	.. ..	9,280	30 24 6	16 15 6	9 34 0
1903-04	.. ..	9,138	31 6 9	18 14 0	11 12 0
1904-05	.. ..	9,369	42 37 0	16 24 2	14 10 0
1905-06	.. ..	9,645	33 36 0	19 24 0	14 17 0
1906-07	.. ..	10,572	28 27 0	19 38 0	14 26 0
1907-08	.. ..	11,588	32 3 0	21 9 0	20 11 0
1908-09	.. ..	10,297	27 14 0	20 31 0	17 4 0
1909-10	.. ..	10,030	32 33 0	19 30 0	19 15 0
1910-11	.. ..	12,197	37 20 0	25 19 0	20 29 0
1911-12	.. ..	15,209	40 19 0	30 31 0	21 9 0
1912-13	.. ..	13,725	39 26 0	23 31 0	24 19 0
1913-14	.. ..	16,032	35 11 0	24 31 0	22 11 8
1914-15	.. ..	14,460	34 20 0	23 20 0	23 29 0
1915-16	.. ..	12,827	26 14 0	20 0 0	19 18 0
1916-17	.. ..	15,137	29 36 0	19 16 0	19 8 0
1917-18	.. ..	18,405	31 29 0	22 2 0	21 27 0
1918-19	.. ..	99,438	31 15 0	26 37 0	16 7 0
1919-20	.. ..	1,13,619	26 35 0	17 33 0	14 9 0
1920-21	.. ..	1,19,935	29 17 0	17 10 0	15 31 0
1921-22	.. ..	67,367	30 10 0	18 0 0	16 30 0
1922-23	.. ..	1,05,643	33 20 0	12 30 0	17 11 0
1923-24	.. ..	1,40,225	32 24 0	15 1 0	16 27 0
1924-25	.. ..	1,35,919	31 0 0	13 0 0	17 11 0

TABLE IX—*concl.*

Year.		Country spirit.	Ganja.			Bhang.			Opium.		
1		2	3			4			5		
		L. P. Gallons.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.	Mds.	Srs.	Chs.
1925-26	.. ..	1,08,565	34	20	0	14	26	0	21	17	0
1926-27	.. ..	1,15,046	29	7	0	11	0	0	19	5	0
1927-28	.. ..	1,07,390	31	12	0	8	2	0	14	36	0
1928-29	.. ..	85,439	28	37	0	6	5	0	15	23	0
1929-30	.. ..	88,746	29	29	0	6	20	0	14	17	0
1930-31	.. ..	61,471	29	9	0	5	28	0	14	25	0
1931-32	.. ..	47,303	27	19	0	4	38	0	13	12	0
1932-33	.. ..	29,816	21	19	0	4	20	0	11	16	0
1933-34	.. ..	10,221	18	27	0	5	3	0	12	22	0
1934-35	.. ..	..	17	4	0	5	8	0	12	4	0
1935-36	.. ..	..	16	2	0	7	25	0	11	24	0
1936-37	.. ..	..	16	12	0	8	5	0	10	32	0
1937-38	.. ..	..	22	27	0	16	13	0	12	16	0
1938-39	.. ..	..	19	17	0	16	22	0	12	30	0
1939-40	.. ..	..	15	18	0	13	15	0	8	3	0
1940-41	.. ..	..	17	25	0	17	33	0	8	32	0
1941-42	.. ..	..	15	11	0	20	24	0	9	12	0
1942-43	.. ..	..	13	35	0	28	28	0	11	8	0
1943-44	.. ..	..	18	7	0	32	9	0	10	26	0
1944-45	.. ..	15,366	21	36	0	28	37	0	12	2	0
1945-46	.. ..	15,432	20	12	0	30	25	0	14	10	0
1946-47	.. ..	..	17	23	0	32	10	0	17	1	0
1947-48	.. ..	1,25,825	17	23	0	32	10	0	17	1	0
1948-49	.. ..	1,25,825	20	6	0	38	0	0	9	10	0
1949-50	.. ..	1,84,158	10	14	0	46	5	0	8	9	0
1950-51	.. ..	2,42,494	15	19	0	43	13	0	5	31	0
1951-52	.. ..	2,88,968	20	3	0	40	22	0	4	33	0
1952-53	.. ..	2,22,245	13	7	0	41	9	0	3	25	0
1953-54	.. ..	1,99,776	15	30	0	38	5	0	3	29	0

VIII. Middle Schools	..	19	3	22	2,443	268	2,711	85	3	26	2	111	6
IX. Senior Basic Schools	..	..	..	..	..	..	..	..	..	..	..	..	..
X. Primary Schools	..	685	58	743	20,809	1,790	22,599	480	21	617	28	1,097	49
XI. Junior Basic Schools	..	..	..	..	..	..	..	..	..	..	..	..	..
XII. Nursery Schools	..	..	..	..	..	..	..	..	..	..	..	..	..
XIII. Schools for Professional Education.	..	..	..	..	..	..	..	..	..	..	..	..	..
XIV. Schools for Special Education.	..	7	1	8	348	25	373	42	2	11	..	53	2
Total (Recognised)	..	715	63	778	24,943	2,170	27,113	640	30	678	34	1,318	64
Unrecognised	..	..	..	..	..	..	..	..	..	..	..	..	..
Grand Total	..	715	63	778	24,943	2,170	27,113	640	30	678	34	1,318	64

NOTE.—Figures mentioned in this table include figures for College Education in addition to the figures mentioned in the book.

IX. Senior Basic Schools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
X. Primary Schools	..	661	48	709	27,701	2,127	29,828	651	31	365	44	1,016	75	..	..	..	..	..	..
XI. Junior Basic Schools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XII. Nursery Schools	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XIII. Schools for Professional Education.	..	3	..	3	118	..	118	..	..	..	..	..	..	..	..	..	..	..	..
XIV. Schools for Special Education.	..	5	1	6	232	22	254	41	2	..	..	41	2	..	..	..	..	..	2
Total (Recognised)	..	716	56	772	37,631	3,281	40,912	887	74	545	65	1,432	139	..	..	..	..	..	..
Unrecognised	..	49	2	51	977	41	1,018	..	..	54	2	54	2	..	..	..	..	..	..
Grand Total	..	765	58	823	38,608	3,322	41,930	887	74	599	67	1,486	141	..	..	..	..	..	..

NOTE.—Figures mentioned in this table include figures for College Education, Professional Education and Unrecognised Institutions in addition to the figures mentioned in the book.

TABLE XI.
Epidemiological Statistics (District—Hazaribagh).

Year.	Cholera.		Plague.		Small-Pox.		No. of Inoculations.		No. of Vaccinations.	
	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Anti-Cholera.	Anti-Plague.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11
1932	25	..	..	..	55	..	47,186	5,564
1933	10	..	..	..	568	..	48,951	15,317
1934	1,408	..	..	..	1,452	..	43,139	40,660
1935	4,973	..	..	..	1,177	..	40,690	26,182
1936	685	..	..	..	602	..	..	..
1937	341	..	..	..	76	..	40,295	5,060
1938	509	..	..	..	32	..	41,414	5,106
1939	916	..	..	..	257	..	44,792	30,999
1940	199	..	..	..	635	..	..	..
1941	1,140	..	..	..	523	..	40,460	51,419
1942	903	..	..	..	204	25,070	40,363	30,447
1943	3,633	..	..	..	207	98,339	40,211	33,561

1944	..	..	..	668	..	..	..	335	19,168	..	38,354	60,580
1945	..	..	..	957	..	..	..	775	99,787	..	38,615	144,450
1946	..	..	..	872	..	..	..	336	121,371	..	50,509	134,354
1947	..	..	..	843	..	..	..	78	228,927	..	43,084	125,183
1948	..	..	..	458	..	..	..	156	302,886	..	43,269	150,743
1949	..	..	..	280	..	..	..	59	243,942	..	49,855	99,192
1950	..	..	..	534	..	..	..	147	256,915	..	49,881	123,808
1951	..	..	..	116	..	..	880	641	216,122	..	53,919	502,875
1952	..	..	815	397	..	..	336	58	527,557	..	45,021	409,025
1953	..	..	290	131	..	..	194	15	626,435	..	26,036	242,092

TABLE XII.
Livestock Population (District—Hazariabagh).

Year.	Cattle.			Buffaloes.							Sheep.	Goats.
	Total cattle.	Male cattle.	Female cattle.	Young stock (calves).	Total.	Male buffaloes.	Cow buffaloes.	Young stocks (buffalo-calves).				
1	2	3	4	5	6	7	8	9	10	11		
1920	..	757,043	266,503	273,308	217,232	213,702	107,901	53,846	51,955	37,521	150,986	
1925	..	694,078	276,601	253,274	164,203	170,173	100,777	44,470	24,926	7,805	155,766	
1930	..	729,374	289,792	253,548	186,039	179,947	123,083	32,165	24,697	33,769	242,333	
1940	..	708,573	292,243	224,980	191,360	152,413	89,348	31,379	31,686	27,827	225,155	
1945	..	640,387	282,004	205,259	153,124	161,136	97,160	37,352	26,624	26,975	195,240	
1951	..	889,336	366,876	312,543	209,917	193,925	125,005	47,452	21,468	45,230	316,207	

TABLE XIII.

Mortality of Bovine Population (Cattle and buffaloes) (District—Hazaribagh)

Year.	Causes of death.				
	Rinderpest.	Foot and mouth diseases.	Haemorrhagic Septicaemia.	Other contagious diseases.	
1	2	3	4	5	
1937-38	791	12	217	104	
1938-39	1,336	9	257	101	
1939-40	829	3	152	30	
1940-41	47	2	122	32	
1941-42	243	9	257	92	
1942-43	73	..	123	14	
1943-44	2,330	5	54	19	
1944-45	672	..	114	51	
1945-46	513	3	217	130	
1946-47	609	..	318	49	
1947-48	625	..	101	94	
1948-49	325	14	278	45	
1949-50	347	25	390	99	
1950-51	536	17	113	149	
1951-52	359	21	96	375	
1952-53	51	7	170	215	
1953-54	31	7	259	182	

TABLE XIV.
Livelihood Classes by Educational Standards in 1951 (District—Hazariabagh);

AGRICULTURAL CLASSES.									
Educational Standards.	Cultivators of land wholly or mainly owned and their dependants.		Cultivators of land wholly or mainly unowned and their dependants.		Cultivating labourers and their dependants.		Non-cultivating owners of land, agricultural rent receivers and their dependants.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	2	3	4	5	6	7	8	9	
Literate ..	68,662	6,303	1,728	238	2,790	242	661	313	
Middle School ..	3,984	416	137	11	137	23	120	27	
Matriculate ..	967	89	36	1	53	8	53	8	
Intermediate ..	135	16	5	1	11	3	9	1	
Degrees or Diplomas:—									
Graduate ..	66	8	1	1	6	3	8	—	
Post-Graduate ..	42	..	..	..	9	..	..	..
Teaching ..	38	12	..	..	..	..	7	..	
Engineering ..	2	..	..	..	..	..	..	..
Commerce ..	..	..	..	..	..	..	..	..
Agriculture ..	2	..	..	..	..	..	..	..
Veterinary ..	..	..	..	..	..	..	..	..
Legal ..	3	..	..	..	..	..	2	..	
Medical ..	29	..	..	..	..	..	2	..	
Others ..	78	..	1	..	22	..	..	..
Total ..	74,008	6,844	1,908	252	3,027	279	862	349	

TABLE XIV—*concl'd.*
Livelihood Classes by Educational Standards in 1951 (District—Hazaribagh)—*concl'd.*

NON-AGRICULTURAL CLASSES.												
Educational Standards.	Production other than cultivation.		Commerce.		Transport.		Other services and miscellaneous sources.					
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.				
1	10	11	12	13	14	15	16	17				
Literate	17,732	1,695	9,560	2,618	2,660	599	16,148	5,579				
Middle School	1,883	162	1,379	180	370	54	3,314	685				
Matriculate	1,528	53	703	47	349	16	2,787	308				
Intermediate	133	6	109	7	45	3	452	52				
Degrees or Diplomas—												
Graduate	89	7	81	8	11	3	436	34				
Post-Graduate	15	..	8	1	2	..	106	9				
Teaching	3	..	1	1	1	1	95	13				
Engineering	15	..	1	..	2	..	107	..				
Commerce	3	..	..	..	3	..	17	..	
Agriculture	..	..	..	..	..	..	2	..
Veterinary	5	..	..	..	..	..	..	..
Legal	..	..	3	..	..	..	122	..
Medical	6	..	1	..	2	..	100	7				
Others	42	..	7	..	2	..	47	9				
Total	21,454	1,923	11,853	2,862	3,447	676	23,733	6,606				

TABLE XV(a).
Output of Minerals (District—Hazariabagh).

Minerals.	Average output during the year									
	Units.									
1	2	3	4	5	6	7	8	9		
Coal	3,235,592	2,951,512	2,558,862	2,695,155	4,103,369	4,395,205	4,171,276		
Mica	91,749	91,304	82,482	82,147	70,624	79,173	75,821		
Steatite	1,028	960	550	575	492	8,140	12,800		
Limestone	2,279	3,888	5,892		
Fireclay	1,449	1,794	7,804		

Minerals.	Average output during the year									
	Units.									
1	2	10	11	12	13	14	15	16	17	
Coal	2,353,219	3,493,772	3,079,207	3,568,378	3,940,147	3,989,339	3,897,269	3,931,679	
Mica	79,215	86,786	95,248	101,224	86,738	71,126	58,582	72,066	
Steatite	12,778	12,655	15,037	18,930	14,857	23,650	108,600	92,814	
Limestone	3,635	7,590	4,551	7,442	2,799	1,601	4,039	6,198	
Fireclay	4,726	3,289	6,771	..	8,694	..	9,805	9,955	

TABLE XV(b).
Employment in Mines (District—Hazariabagh).

Average number of workers per day during the year									
Minerals.									
	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.	
1	2	3	4	5	6	7	8	9	
Coal ..	24,624	25,104	22,553	33,185	41,206	50,583	46,497	40,655	
Mica ..	26,314	28,370	31,585	27,614	23,717	20,148	19,714	19,285	
Steatite ..	221	258	180	165	118	88	107	123	
Limestone ..	..	..	..	..	15	27	54	26	
Fireclay ..	..	..	..	..	25	61	67	25	

Average number of workers per day during the year									
Minerals.									
	1949.	1950.	1951.	1952.	1953.	1954.	1955.		
1	10	11	12	13	14	15	16		
Coal ..	38,632	38,701	36,272	34,431	34,227	33,857	36,023		
Mica ..	17,162	17,699	22,955	19,393	16,606	13,145	13,578		
Steatite ..	170	204	166	178	184	260	360		
Limestone ..	51	46	42	27	38	14	42		
Fireclay ..	28	38	..	71	..	36	39		

TABLE XVI.

Average Daily Population in Jail (District—Hazaribagh).

Period.	Convict.	Under trial.	Security.		Total population.
Average annual figures during—	Ordinary and political.	Ordinary and Political.	Class I.	Class II.	
1	2	3	4	5	6
1920 ..	342.76	124.36	..	..	467.12
1930 ..	640.96	28.22	..	..	669.18
1940 ..	802.04	129.94	..	..	931.98
1950 ..	856.59	253.02	12.79	.	1122.40
1951 ..	849.54	220.61	3.63	..	1073.78
1952 ..	877.83	332.87	1.95	..	1212.65
1953 ..	1119.30	254.10	0.88	..	1374.28

TABLE XVII.

Electrified localities in Hazaribagh district.

Names of the towns electrified.			Sources of Power
1. Hazaribagh	...	...	D. V. C. Grid.
2. Jhumri Tilaiya	...	...	Ditto.
3. Ramgarh	...	...	Ditto.
4. Giridih	...	...	Beniadih Power House.
Names of the villages electrified.			
1. Gumia	...	...	D. V. C. Grid.
2. Saram	...	...	Ditto.
3. Hosir	...	...	Ditto.
4. Khudgoria	...	...	Ditto.
5. Gujandih	...	...	Ditto.
6. Nawadih	...	...	Ditto.
7. Dandiadih	...	...	Ditto.
8. Patralu	...	...	Ditto.
9. Bhabandai	...	...	Ditto.
10. Oriya	...	...	Ditto.
11. Barhi	...	...	Ditto.
12. Zokahe	...	...	Ditto.
13. Pelwal	...	...	Ditto.
14. Sitagara	...	...	Ditto.
15. Singhari	...	...	Ditto.
16. Zahsinghnar	...	...	Ditto.
17. Debore	...	...	Ditto.
18. Domchanch	...	...	Ditto.
19. Masnodih	...	...	Ditto.
20. Inderwa	...	...	Ditto.
21. Lokai	...	...	Ditto.
22. Jolhabad	...	...	Ditto.
23. Sibsagar	...	...	Ditto.
24. Behradih	...	...	Ditto.
25. Chitagpur	...	...	Ditto.
26. Gawan	...	...	Ditto.
27. Kanungobigh	...	...	Ditto.

Names of the villages electrified.	Sources of Power	
28. Lakhibagi	...	D. V. C. Grid.
29. Kodarma	...	Ditto.
30. Bashria-Bagan	...	Ditto.
31. Bharkakola	...	Ditto.
32. Asnabad	...	Ditto.
33. Dhab	...	Ditto.
34. Bangakhawar	...	Ditto.
35. Maheshmundi	...	Ditto.
36. Baddina	...	Ditto.
37. Sehodin	...	Ditto.
38. Karharbari	...	Ditto.
39. Sirsia	...	Ditto.
40. Koeritola	...	Ditto.
41. Pachemba	...	Ditto.
42. Khesmi	...	Ditto.

NOTE.—Hazaribagh district gets electric power from the D. V. C. Grid which is at present supplied power from the Thermal Power Station at Bokaro and Hydel Power Station at Tilaiya. The State Government avail power from the D. V. C. Grid at Tilaiya and Ramgarh for distribution in this district. Giridih is at present getting power from the Railway Power House at Baniadih but it will also be ultimately supplied from the D. V. C. Grid.

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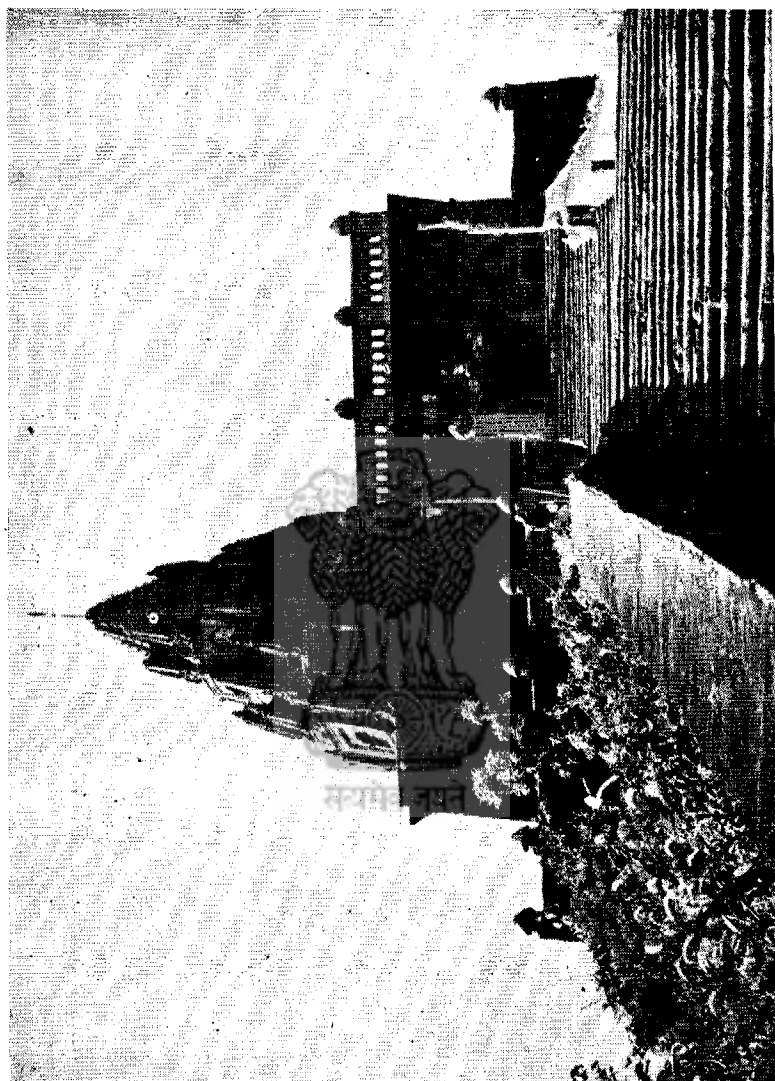
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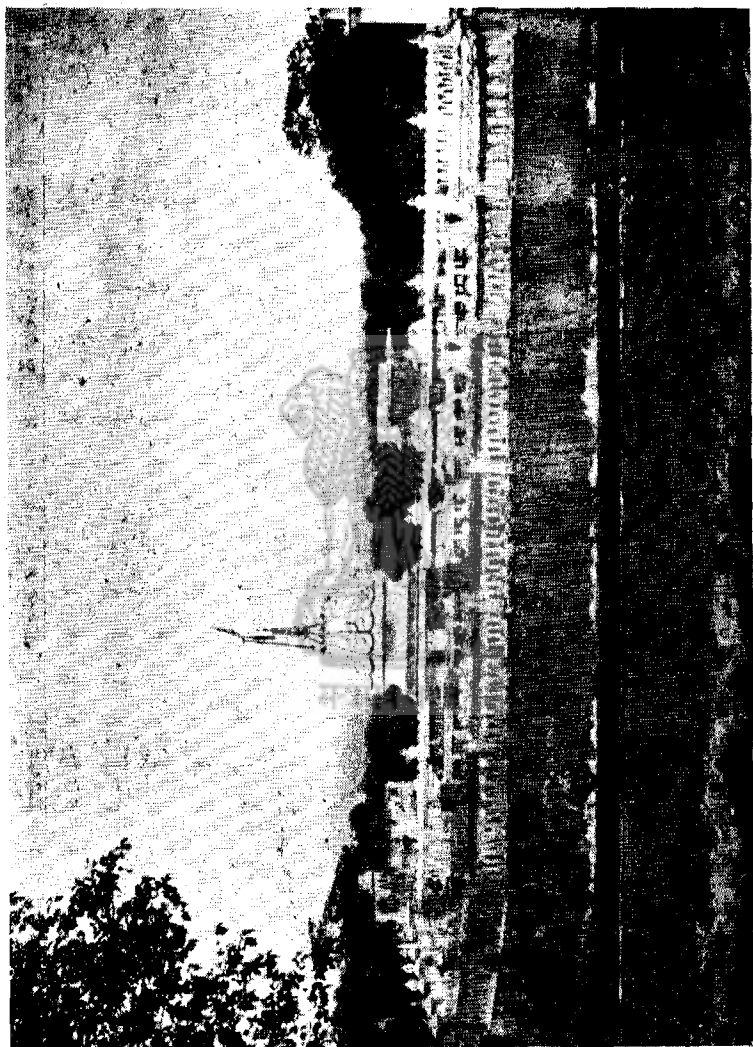




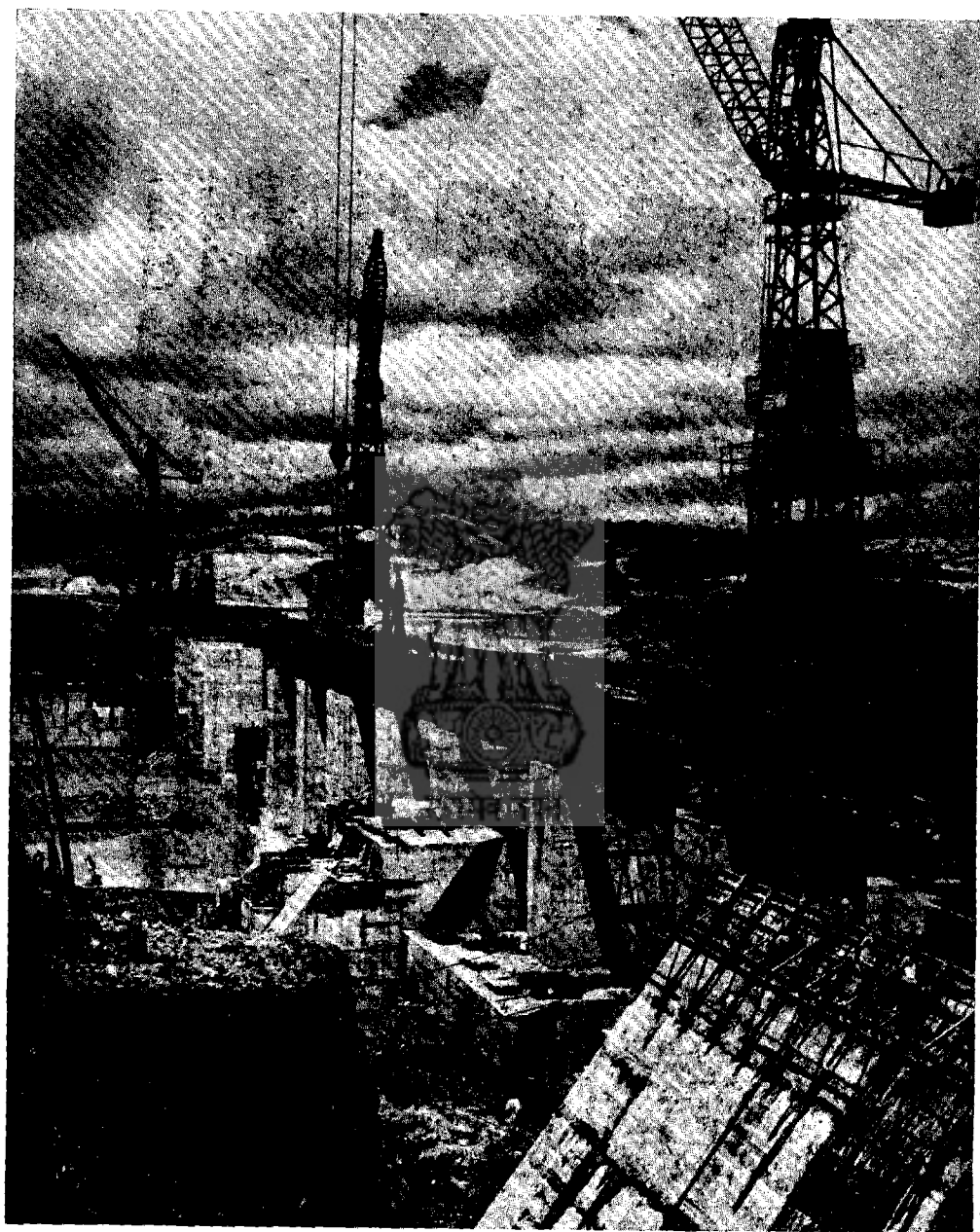
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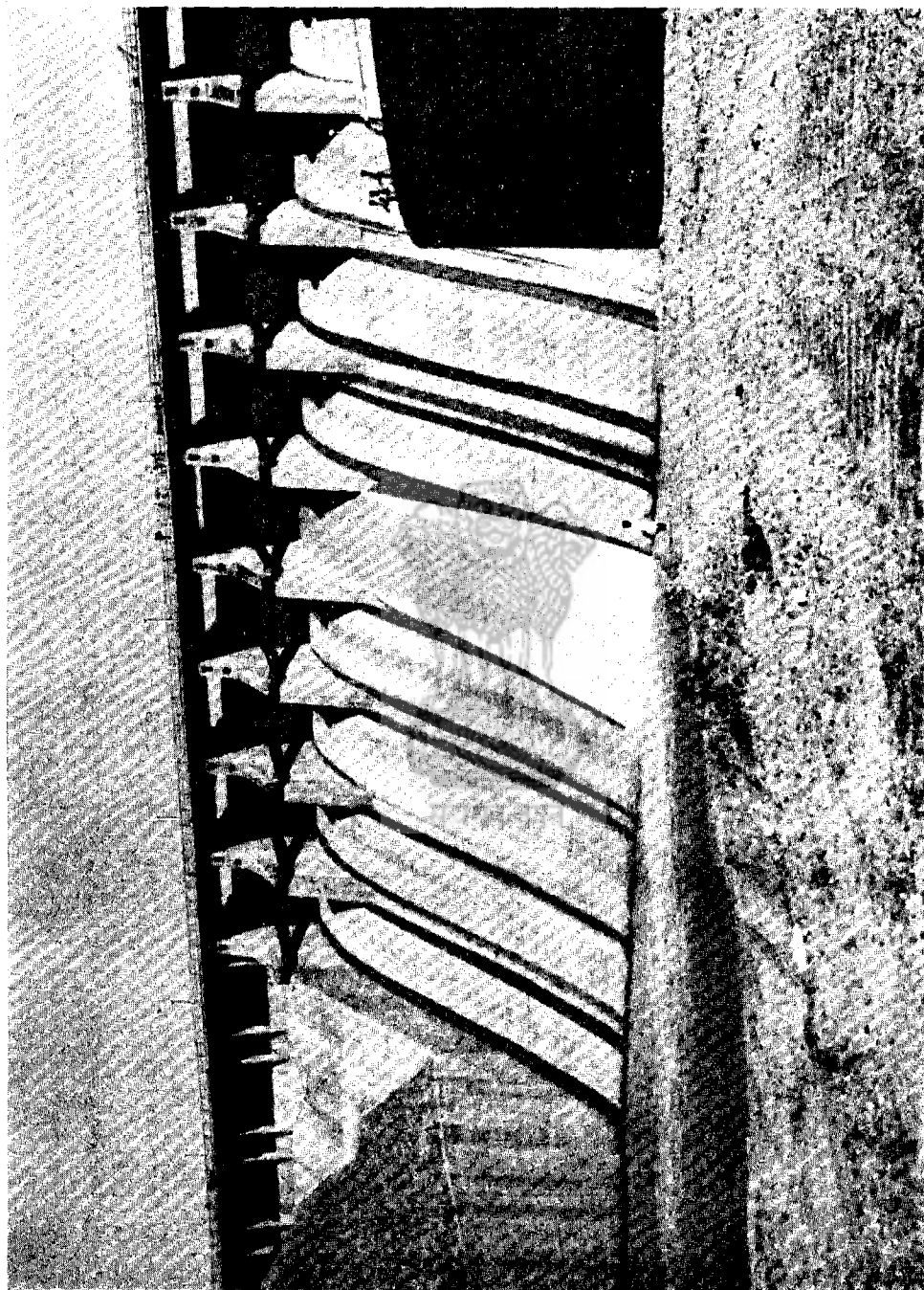
Parasnath Temple at Parasnath



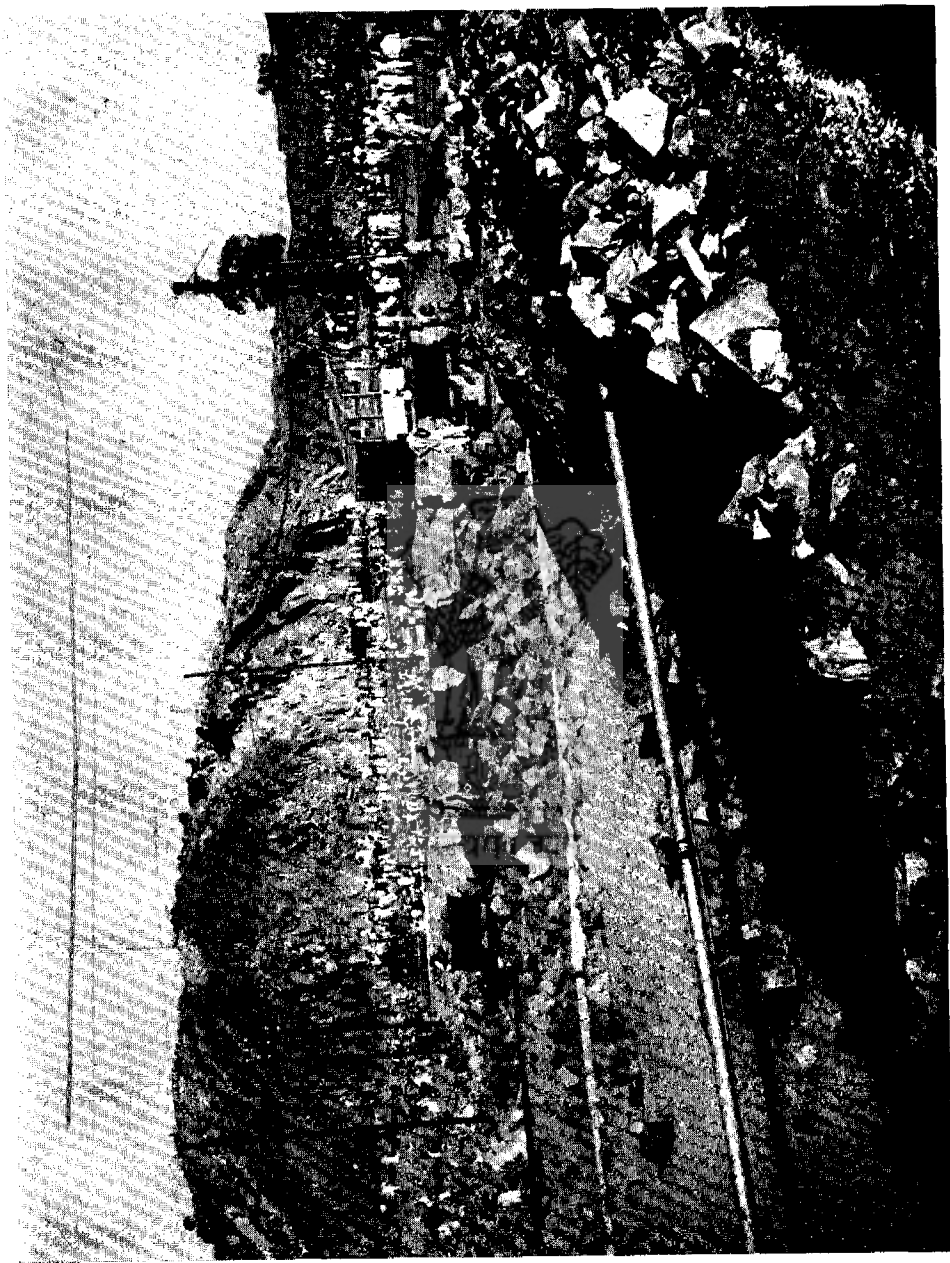
Jalamandir at Parasnath



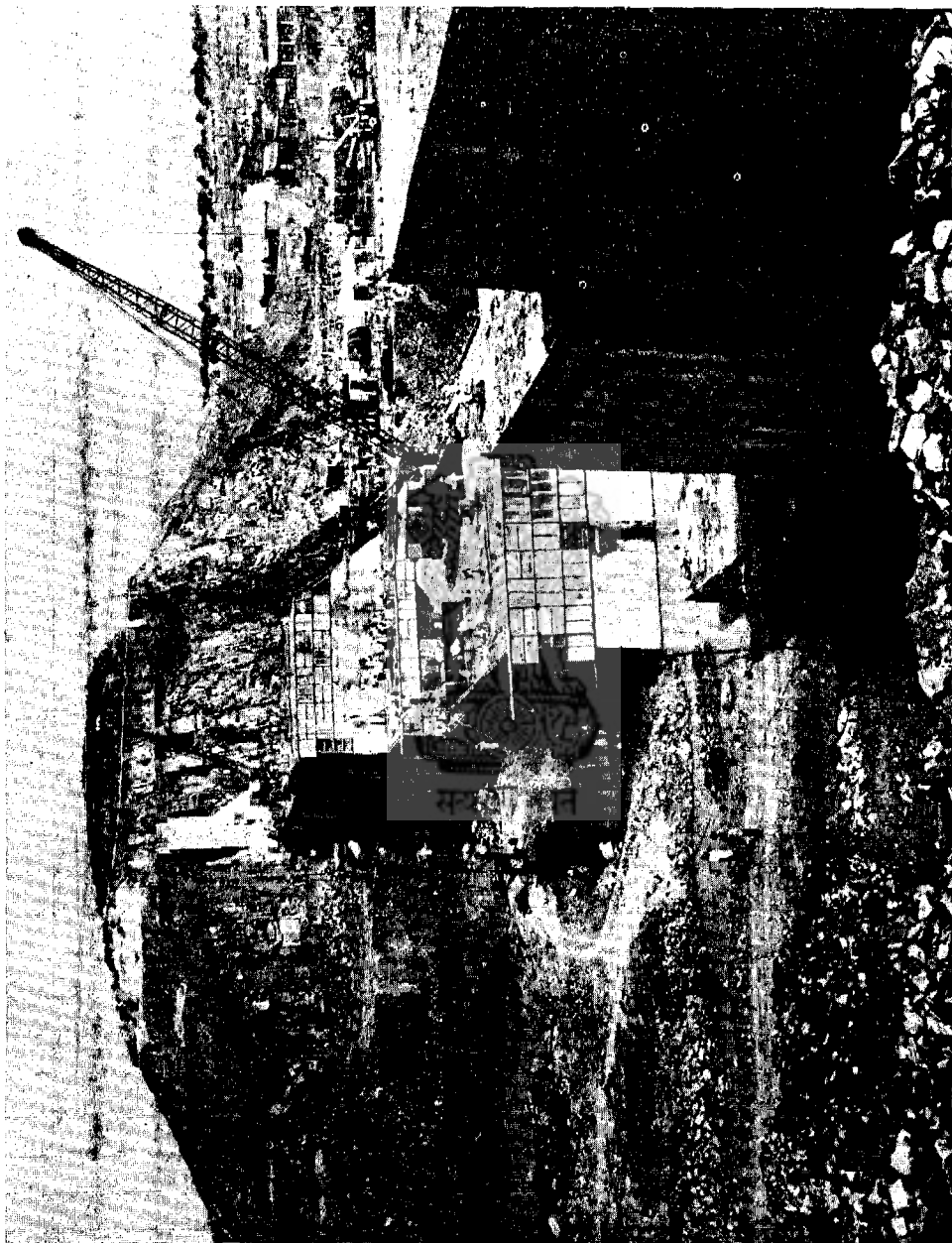
Concrete Dam, Konar, 1952 (under construction)



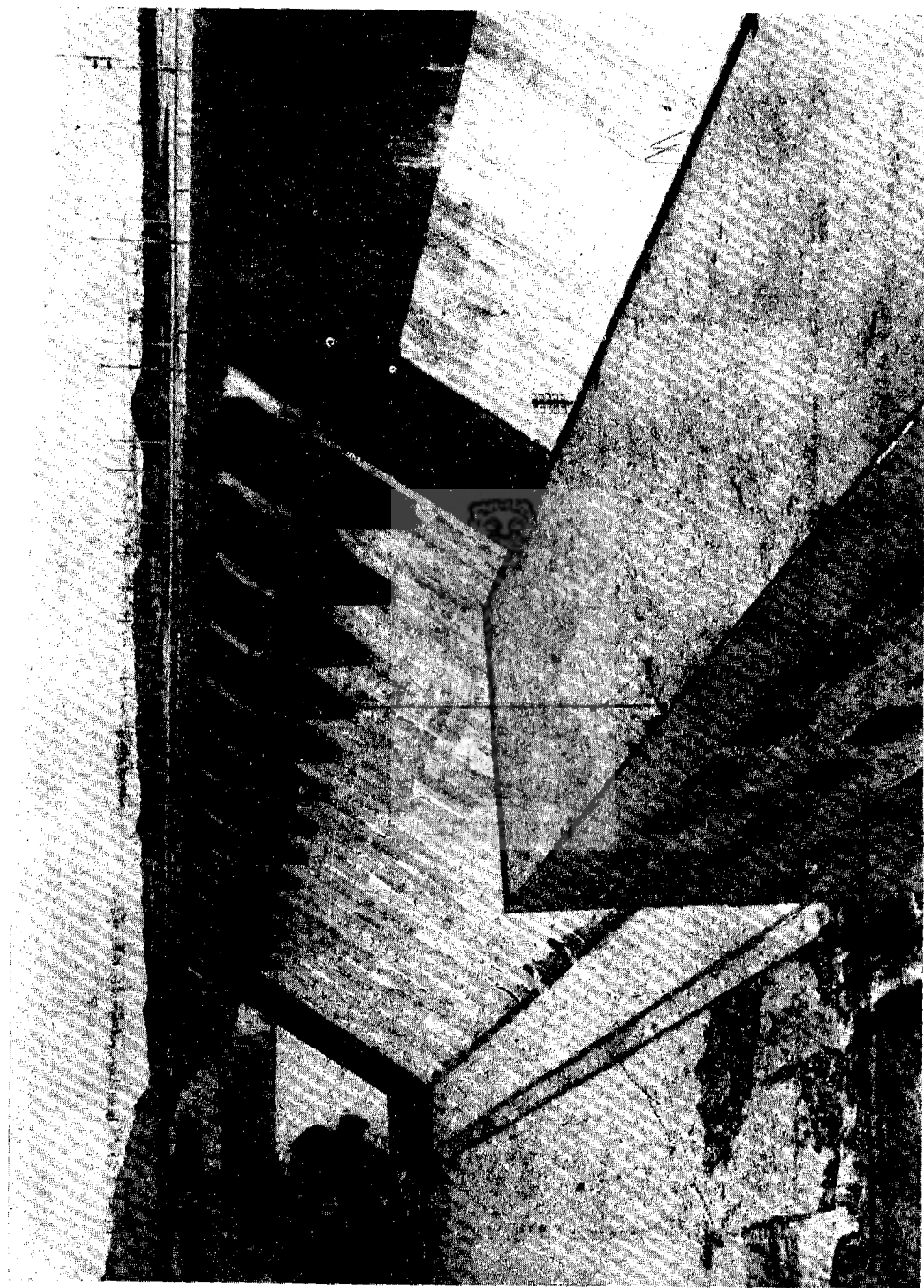
Konar Dam, 1955 (down-stream view)



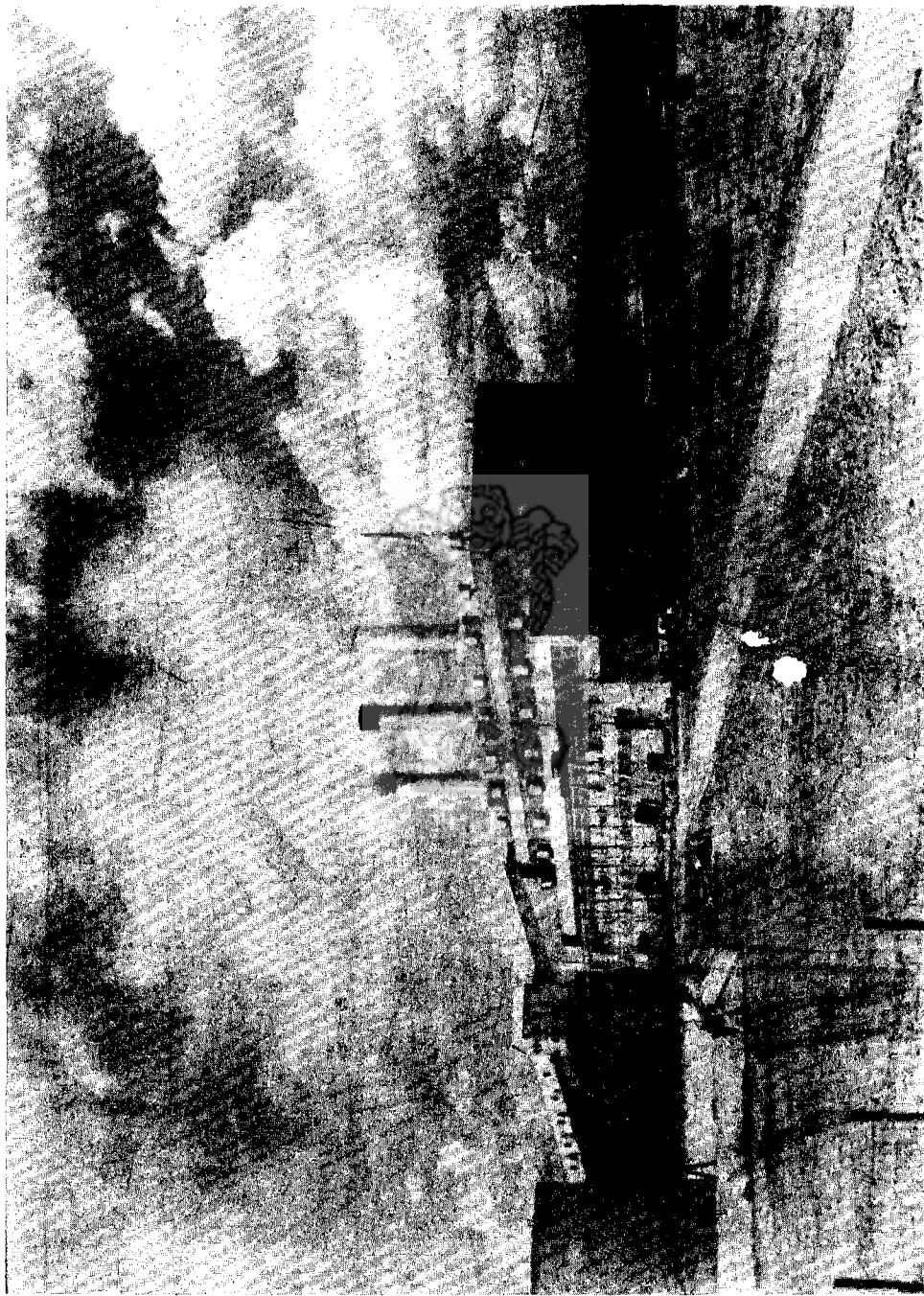
General view of Tilaiya Dam site, 1950



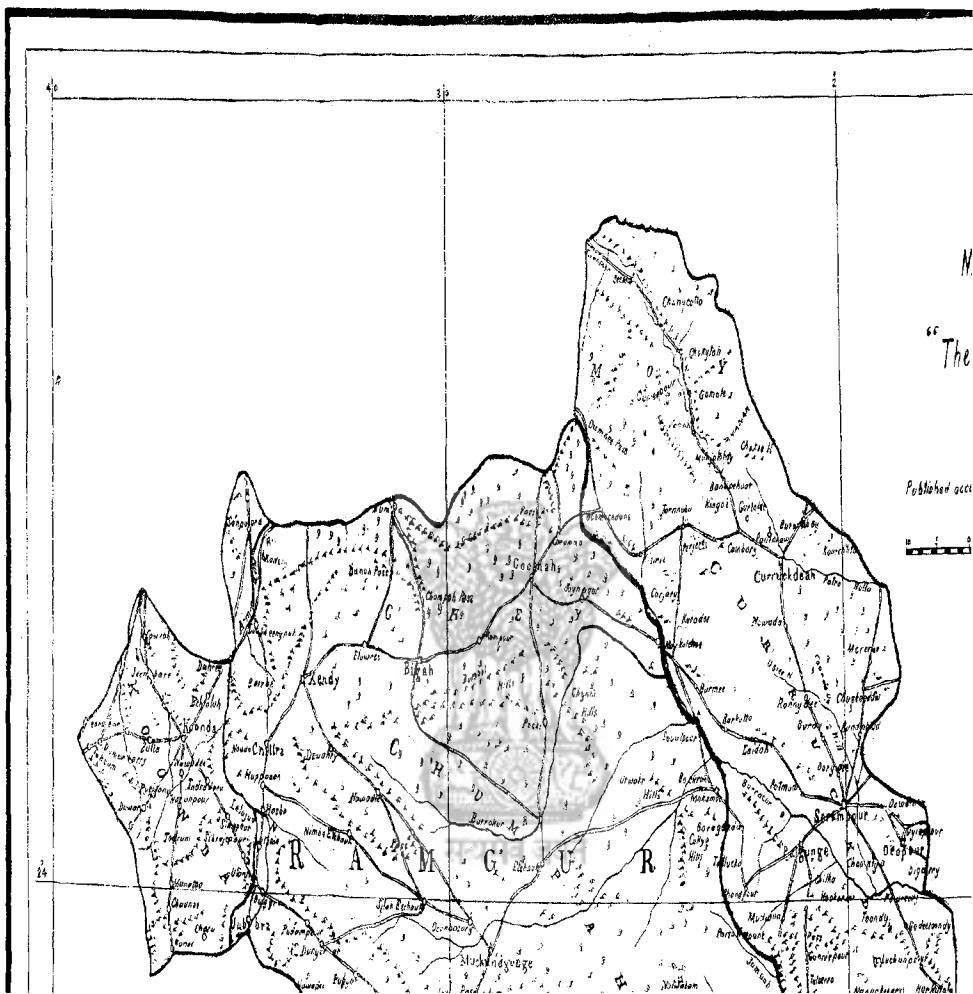
Tilaiya Dam, 1952 (under construction)



Tilaiya Dam and Power House, 1953

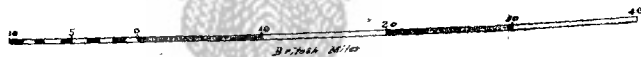


Bokaro Thermal Power Station, 1953

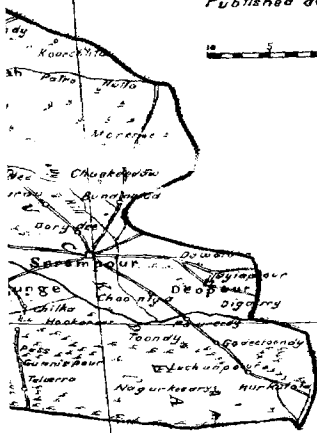


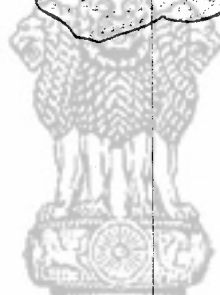
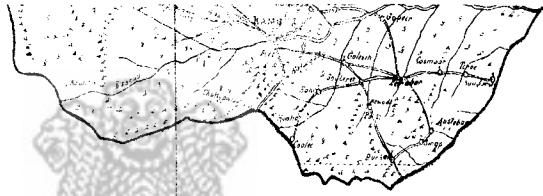
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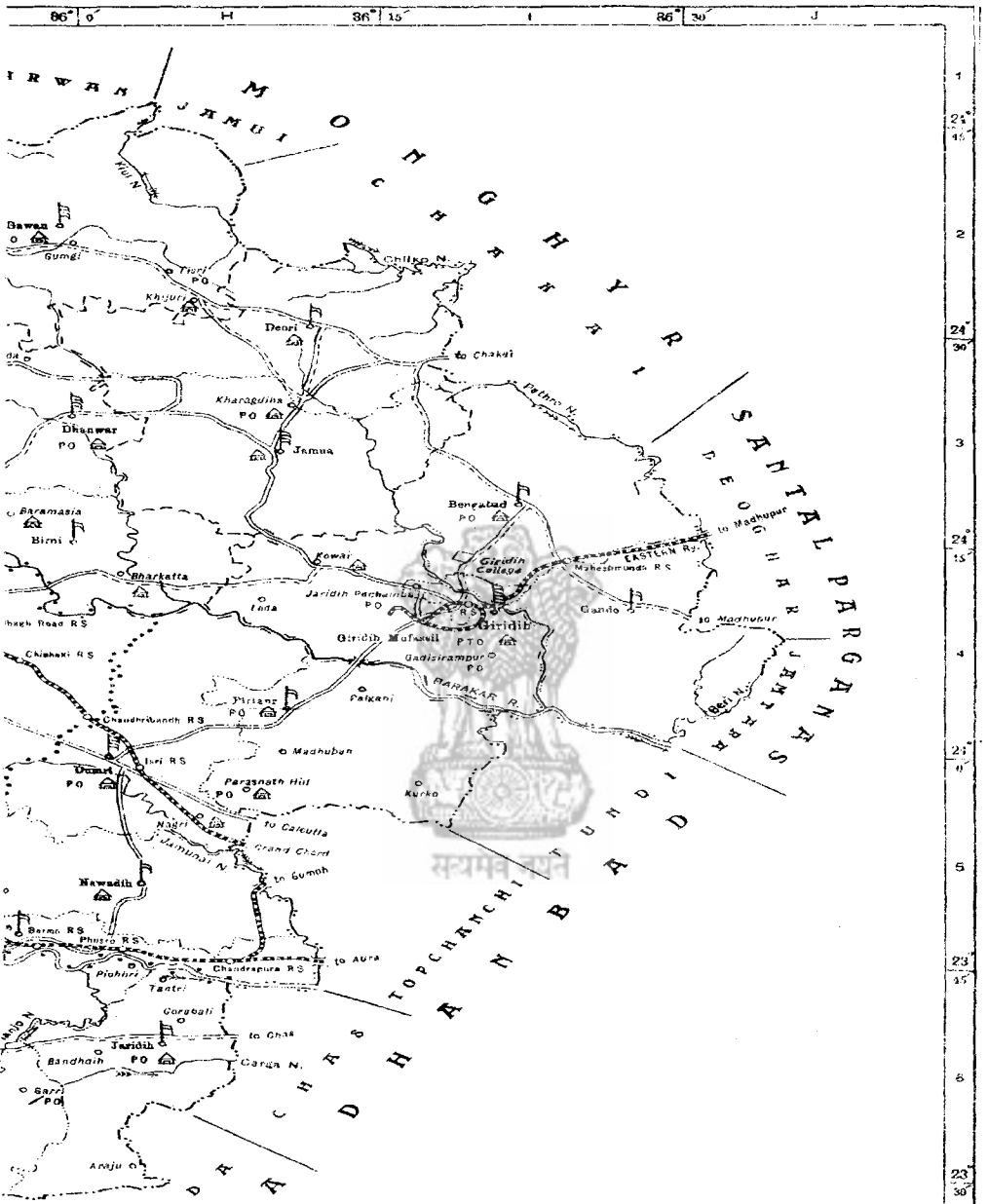


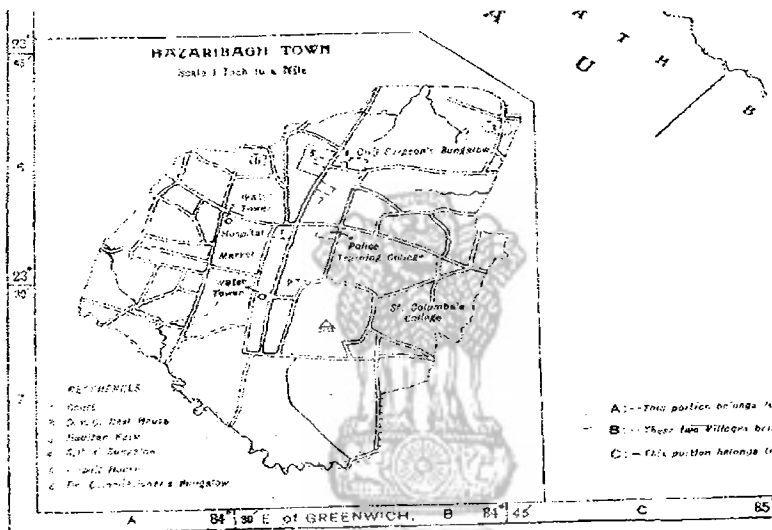


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The map illustrates the geographical features and administrative divisions of Hazaribagh District. Key elements include:

- Towns and Villages:** Hazaribagh, Giridih, Jaisangpur, Barahat, and many smaller settlements.
- Rivers:** Hazaribagh River, Ganges, and others.
- Dams:** Tilaia Dam, Chaurama Dam, Kunkur Dam, etc.
- Administrative Divisions:** PTOs (Police Thana Offices), PSOs (Police Station Offices), and other local governance areas.





W. S. J. 1877, May 31, 1899

Route	Distance	State
1	Subsidiary
2	Trunk
3	Water
4	Water
5	Water
6	Water
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9	Water
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100	Water

[illegible]

DISTRICT HAZARIBAGH POPULATION MAP

SHOWING DENSITY, AGRICULTURAL, NON-AGRICULTURAL
AND TOTAL POPULATION, 1951
(POLICE STATION UNIT BASIS)

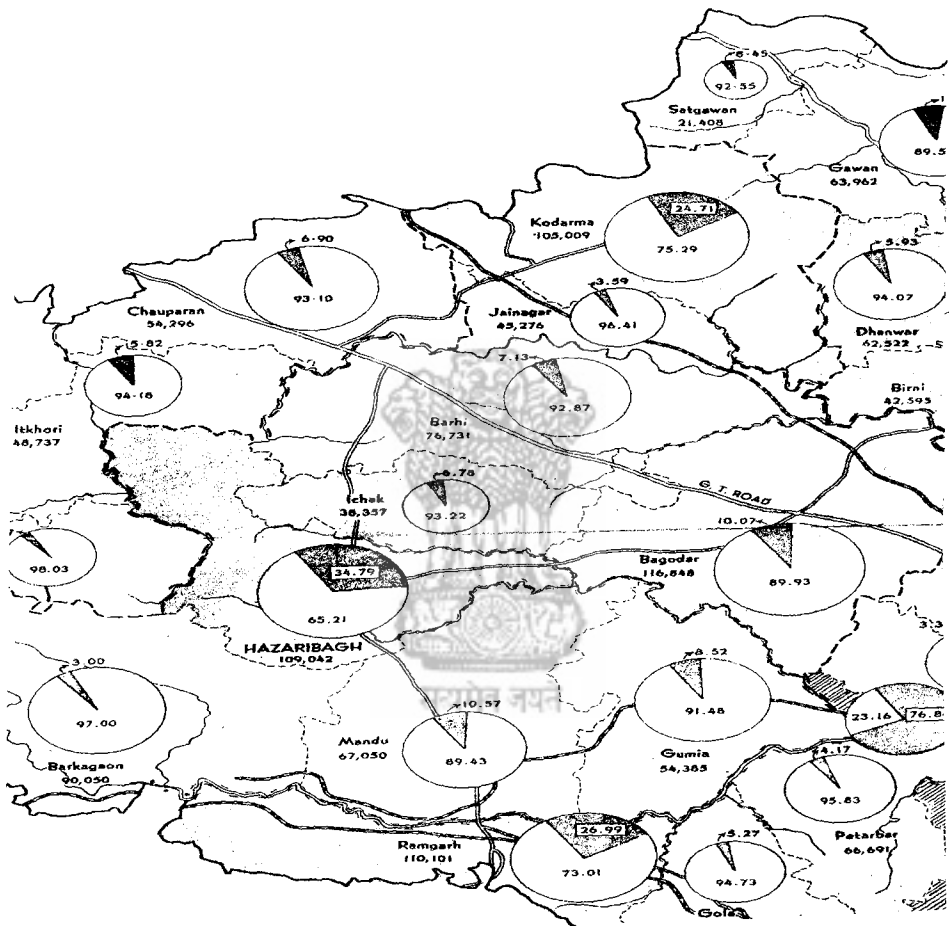
Scale 1 Inch = 6 Miles
MILES 2 4 3 2 1 0 5 10 15 20 Miles



REFERENCES

DENSITY OF POPULATION, PERSONS PER SQUARE MILE

85° 15' 85° 30' 85° 45'



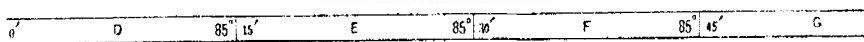


Thana Sherghati District Gaya

up to P.S. Patna Divisional Headquarters

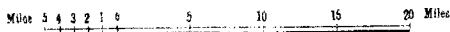
Thana Kujura District Hazaribagh

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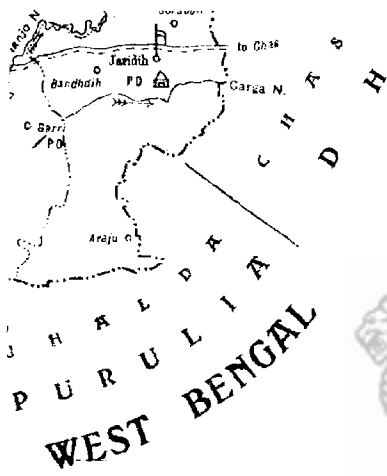


COMPILED & ZIMPOGRAPHED IN THE BIHAR SURVEY OFFICE, GULIARPORE, PATNA IN 1927.

Scale 1 Inch to 8 Miles, or 1:506,560.



Area 6865.97 sq: Miles

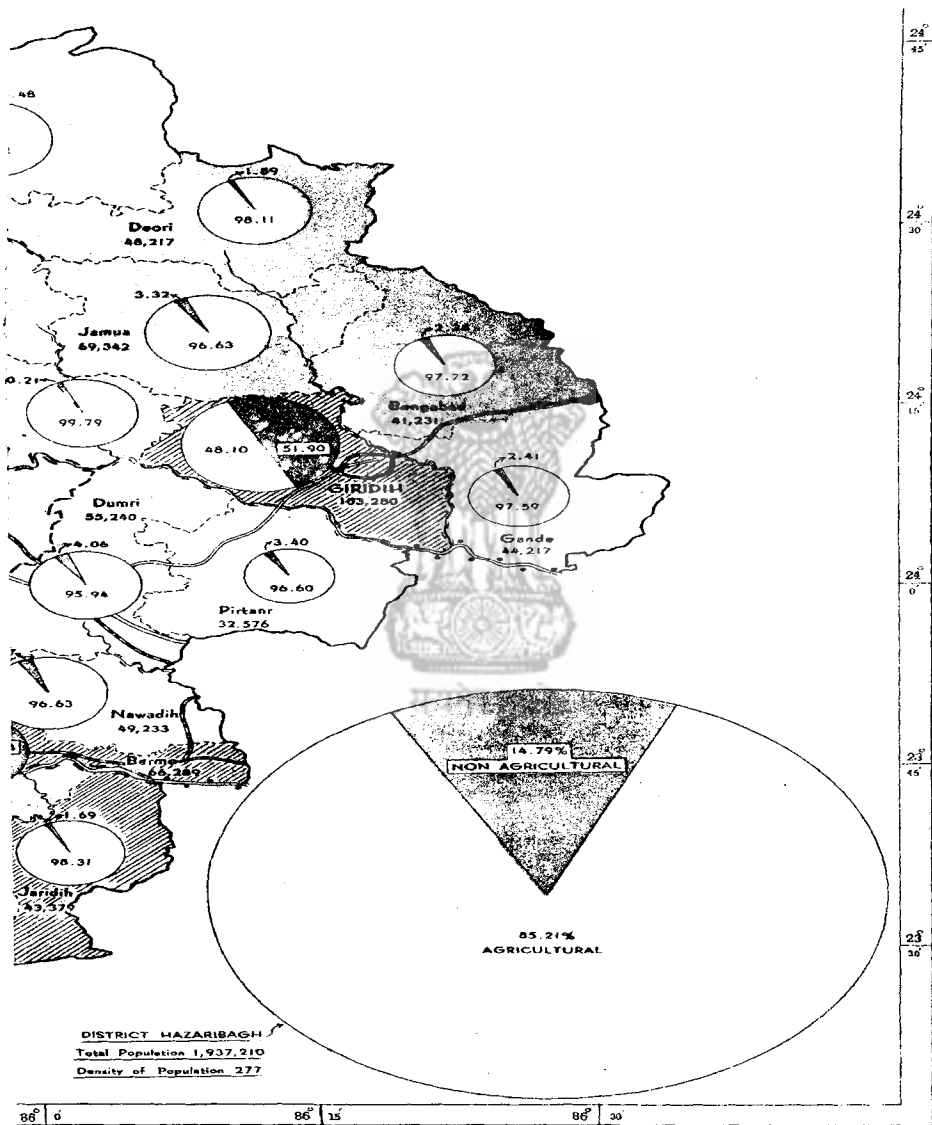


6
23
30
7

85° 0' H 86° 15' I 86° 30' J

COPIES OBTAINABLE FROM THE BIHAR SURVEY OFFICE, GULZARBAGH, PATNA.

Main road: — Metalled			
do Unmetalled			
Bungalows: — Dak, Inspection			
Head Quarters: — Subdivision, Thana, Police Station			
Post Office, Post & Telegraph Office	PO		PTO
Dam, Fort			
Trigonometrical Station with height			CHANDWAR 2814



Drawn & Zimographed in the Survey Office Cuttack Hazaribagh India